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ART. 36.—*Principles of Improving the Domestic Animals used in Agriculture.* [From Loudon's Enc. of Agr.] *Continued from Vol. 2. p. 46.*

Abundant nourishment is necessary to produce the most perfect formed animal, from the earliest period of its existence until its growth is complete. As already observed, the power to prepare the greatest quantity of nourishment from a given quantity of food, depends principally on the magnitude of the lungs, to which the organs of digestion are subservient.

The characters of animals, or the external appearances by which the varieties of the same species are distinguished, are observed in the offspring; but those of the male parent more frequently predominate. Thus, in the breeding of horned animals there are many varieties of sheep, and some of cattle, which are hornless. If a hornless ram be put to horned ewes, almost all the lambs will be hornless; partaking of the character of the male more than of the female parent. An offspring without horns, or rarely producing horns, might be obtained from the Devonshire cattle, by crossing with hornless bulls of the Galloway breed; which would also improve the form of the chest; in which the Devonshire cattle are often deficient.

Examples of the good effects of crossing may be found in the improved breeds of horses and swine in England. The great improvement of the breed of horses arose from crossing with the diminutive stallions, Barbs and Arabians; and the introduction of Flanders mares into this country was the source of improvement in the breed of cart horses. The form of the swine has been greatly improved, by crossing with the small Chinese boar.

Examples of the bad effects of crossing the breed are more numerous. When it became the fashion in London to drive large bay horses, the farmers in Yorkshire put their mares to much larger stallions than usual, and thus did infinite mischief to their breed, by producing a race of small chested, long legged, large boned, worthless animals.

The pliancy of animal economy is such, that an animal will gradually accommodate itself to great vicissitudes in climate, and alterations in food; and by degrees undergo great changes in constitution; but these changes can be effected only by degrees, and may often require a great number of successive generations for their accomplishment. It may be proper to improve the form of a native race, but at the same time it may be very injudicious to attempt to enlarge their size; for the size of animals is commonly adapted to the soil and climate which they inhabit.

[On application being made to Mr. Buel, to become umpire in the dispute relating to the garden productions of the Middle States and of England, he declined from the delicacy of the office, or from an apprehension that he was viewed, by those on one side of the question, as a partizan, rather than as a disinterested umpire. On being assured, however, by the Editor, that information from him on the subject would be very acceptable to the readers of the Farmer, he has obligingly furnished the following interesting article, with an expression of preference that his name might not accompany it; but as his manner of treating the subject is entirely unobjectionable, the Editor trusts that he will not be wanting in courtesy to Mr. Buel, to annex his name.]

ART. 37.—*The Climate of the Middle States compared with that of Great Britain, in reference to the productions of Horticulture.* By J. Buel Esq.

[For the N. Y. Farmer and Hor. Repository.]

The Middle States embrace a latitude of five degrees, from 38° to 43°. England is comprised in about the same extent of latitude from the British Channel, in 50°, to the Scottish Border, in 55°. There is, therefore, between the two countries, a difference in latitude of twelve degrees. Local causes combine, however, to render the difference in climate, far less than the difference of latitude would seem to indicate. Great Britain is an Island, surrounded by the ocean, the temperature of which never being below 32°, serves much to mitigate the severity of the cold which is experienced in corresponding latitudes upon Continents. The same cause contributes materially to moderate the heats of summer, and to render the air humid at all seasons. The extremes of heat in summer, and cold in winter, consequently, are much less severe in England, than in the Middle States. Taking the months of vegetation, from the first of April, to the first of November, the mean heat in the Middle States, may be twelve degrees greater than in England; of the summer months, June, July, and August, eighteen degrees greater; while the

mean temperature of the winter months is probably fifteen degrees colder here than in England. These estimates are conjectural, not having data to render them accurate.

In testing the adaptation of the climates of the two countries to the various productions of the garden, I shall assume as a general rule, what I believe will not be denied, that plants flourish best, and most fully develope their valuable properties in the temperature and soil in which they were originally planted by the hand of nature, and that they deteriorate in proportion as they are removed from their native location. "The American and African plants, says Macphail, (Gard's Remembrancer p. 54,) which are said to be famous in medicine when of the growth of their native soils, yet when they are removed and brought into our climate, (England) though they grow, and even produce their flowers, and ripen their fruit, which is the last perfection of a plant, when put to trial, it is said by skilfull men, they have always been found to want their medicinal virtues." Heat is as necessary an agent in perfecting the fine flavor of American and African fruits, as it is in maturing the medicinal virtues of their plants. Hence, in cultivating the fruits of warmer climates, the English gardener is obliged to resort to artificial and expensive means to supply the necessary heat; and as these means can only be afforded by the affluent, the great mass of the English people are necessarily precluded from many vegetable productions which ripen here in the open grounds, and which are common to our gardens. This will more fully appear in the comparison, which I am about to make of the mode of culture in the two countries, of some of the most prominent products of the garden. I will begin with

The *Apple*, which, though not strictly a garden production, is one of the most abundant and valuable fruits in common use. The Apple *Tree*, if not indigenous, has become naturalized to both countries, and grows in the Orkneys as well as on the St. Lawrence. The varieties are many, and differ in their habits somewhat, according to the climates in which they originate. The Splendid Alexander from Russia, and the beautiful little Crab, from Siberia, grow and produce well both in England and America; while the Mala Carla a native of Italy, an apple of high repute, it is thought will not mature its fruit in England, and the experiment remains to be made with what process it can be cultivated in the Middle States. In Latitude 42° 40' its growth is very little before midsummer, when it becomes strong and vigorous. The beneficial influence of a dry and hot temperature in maturing the generality, and particularly the higher flavored varieties of this fruit, seems to be generally admitted. In any climate, or in any neighborhood, the juices of the fruit become more concentrated and refined in a dry and warm location, than in one which is humid and cool. The best ciders come from orchards situated upon dry and hilly lands. Accurate experiments, I think, would demonstrate, that the Must of the same apple, say of the Styre or Downton Pippin, is richer in saccharine matter when grown in the Middle States, than when grown in Britain. I have frequently been told by Europeans, and among others, by Mr. Douglass, the collector of the London Horticultural Society, that our apples greatly excel those of England; and this is confirmed by the high price which the former bear in the English Market. Loudon's Gardener's Magazine for March, mentions the importation of a large supply of Newtown Pippins which arrived in bad order, but the best of which, however, sold at 2*s*. and 3*s*. per dozen, equal to four and five cents the apple. Some of the finer kinds do not ripen well in the north of England. That either the quantity or quality of this fruit is deficient there, is evidence by the vast importations from America and France. Salisbury estimated that there were 40,000 bushels of French Apples, at one time in and about Covent Garden Market. I have never heard that Apples are *exported* from England.

The *Pear*.—All the kinds that grow in England, are believed to do equally well in the Middle States; while many varieties which mature their fruit well here in the open grounds, in England require the aid of expensive walls of stone or brick. To bring the finer sorts of Pears to perfection in this country (England) says Mc. Phail, they require to be planted in a border close to a high wall, and to have their branches trained against the side of it, about nine or ten inches apart." (Gardener's Remembrancer.)

The Peach.—Persia is supposed to be the original country of the Peach, which lies in 30° to 40° north Latitude, and whose climate is somewhat similar to that of our Southern States. "The best Peaches in Europe are grown at present in Italy, (Lat. 40 to 45°) and next may be cited those of Montreuil, near Paris, (L. 48.) In England there are but two sorts that come to *tolerable* perfection in the open air, (Enc. of Gar. p. 799.) MacPhail makes a like remark, (p. 13,) and affirms, that the Peach can only be brought to perfection by walls, glass frames, or peach-houses. With us the peach grows freely and matures its fruit in the open air; and the earlier varieties, which ripen during the heats of August, attain to as high perfection at Albany and Boston, as at Philadelphia and Baltimore.

The Nectarine.—The remarks I have made in regard to the Peach, apply equally to this fruit. It grows freely with us, but the fruit is very liable to rot on the tree ere it is ripe. Managed as wall fruit, as it is in England, it might succeed better; though Lou-

don observes, that it suffers much more from insects, than the peach, and requires greater attention.

The Apricot.—This tree is said to be natural in Asia, between the 40th & 46th deg. of north latitude. The Breda and Brussels are occasionally planted in England, Loudon tells us, standards or espaliers, in warm situations; and in these States, in fine seasons, produce more highly flavored fruit than when on walls. The other varieties are generally planted against walls, (Enc. of Gar. p.808.) The Standard trees do not come into bearing, says Abercrombie, sometimes under ten or twelve years; but then the fruit, in a congenial situation, is abundant and of the finest flavor. The Apricot thrives here where the Peach does, and no artificial means are used to ripen its fruit. It fruits when young, but is a shy bearer until it acquires age.

The Plum, was origially brought from Syria, (Latitude 30 to 35°) to Greece, and thence to Italy. Varieties of this fruit are also indigenous in higher latitudes, and are found growing wild, in the hedges of England, and the woods and fields of America. Like the Apple, the varieties of the plum seem adapted to different climates and latitudes. In England, "the Plum is cultivated like other indigenous fruit trees; the hardier sorts as standards, and the finer varieties against walls."(*Enc. of Gardening*, p. 812.) With us the Plum, in all its varieties succeeds well without any artificial aid, and perhaps it does not attain higher perfection in any part of the world than in the vicinity of Albany. It may be remarked, that none of the fruits which I have enumerated are trained upon walls in the Middle States, the climate being sufficiently warm to mature the fruit in an open exposure. The Peach is occasionally grown in houses to ensure an early crop of fruit.

The Cherry, of the cultivated varieties, came first from Pontus, (Lat. 40 to 42°,)on the southern border of the Euxine. It is a hardy tree, and perfects its fruit both in England and the United States. In the former it is often trained to a wall; yet most kinds, we are told by Loudon, do well as standards.

The Gooseberry grows wild in Piedmont, (Lat. 46 to 47°,) and in America as far north as 68°. It has been greatly improved by culture in Great Britain, and I believe by artificial varieties; and we are indebted to that country for all the fine kinds at present cultivated in our gardens. This fruit is grown to greater size, and in finer perfection in Britain, than in America; and I think the former has decidedly the advantage in climate for its successful cultivation.

The Grape.—"Farther north of the Equator than 50 degrees of latitude (says Mac Phail) the fruit of the Vine does not ripen well without some assistance being given to the natural climate. In the Southern Counties of England when it is planted and trained against a brick wall of a South aspect, where the heat in Summer sunshine is sometmes above 100°, the finer sorts of Grapes do not come to perfection, for want of heat, in the most favorable seasons." (*Gard. Rem. p.* 65.) We do not find, in the British books on gardening, any directions for cultivating this fruit, but by the aid of walls, glass frames, and grape houses. The experience of this country has not been sufficient to enable us to judge how far we can cultivate the European varieties in the open ground. From the samples exhibited to the New-York Horticultural Society, I understand the opinion to have been pronounced, by the intelligent Horticulturists of that Society, that we can cultivate them successfully. I have seen several varieties fruiting in perfection as far north as Clermont, Catskill, Athens, Albany, Troy, Stillwater, and Ballston, and have known Vines to withstand the severity of our winter without covering. In many localities, and in particular seasons, the fruit is apt to be destroyed by mildew. Observation and experience may enable us to discover the cause, and to apply the remedy. But without depending on foreign varieties, we have an abundance of native kinds, every way adapted to our climate, and our wants, both for the table and for the press, as the experiments of Adlum, Gimbrede, and many others amply demonstrate.

Twenty years practice in cultivating and multiplying our native varieties, with the zeal for horticultural improvements which now prevades the country, cannot fail to develope the excellence of our climate for the culture of this valuable fruit.

The Melon—"This exotic, says Loudon, requires the aid of artificial heat, in the greater part of the year, and even in the warmest months, it cannot be brought to perfection without the aid of glass"(*Enc. of Gar. p.* 643.) The price of this fruit in the London market, which I propose hereafter to quote, will show that it is cultivated in Britain at so great an expense, as to place it altogether beyond the means of the mass of the British population. It will not be necessary to show that the Melon is a very common product of our gardens, because all know that it is sold in our markets in great quantities, and at very moderate prices.

The Cucumber is somewhat more hardy than the Melon, but yet too tender for an English summer. Hence, to adopt the language of Loudon, p. 627, it is forced in pits, hot-beds, hot-houses; and the heat of fire, steam and dung, are applied to its culture. "As far as I know, says M'Phail, the vegetable called Cucumber, does not, in any part of this country, come to any great degree of perfection without some assistance of artificial heat. Therefore, as the natural heat of the climate is deficient in its production, those who wish to have it in perfection must have recourse to

art to supply the insufficiency of nature." (*Gar Rem. p.* 39.) Loudon, however, adds, that in some of the Southern counties the Cucumber is pretty extensively cultivated for pickles, in the open ground. With us this fruit is as common, to all classes, in its season, as the Potatoe.

The Cabbage family, including the Cauliflower, Brocoli, &c. grow better, and form a more important article of food, in great Britain, than in the Middle States. A Kale yard is as essential to a Scotch, as a potatoe patch is to an Irish Cottager. The Cabbage, in its varieties, therefore, occupies a large portion of an English Kitchen Garden, at least an eighth of the open quarters, according to Loudon. With the exception of the good people of Bergen, our countrymen are not celebrated for raising great quantities of this vegetable. The Cauliflower and Brocoli are of but comparative modern culture among us; but they promise to furnish a cheap and constant delicacy for our tables. I will make a remark here which will apply to most of the garden products of the two countries; The period of culture is longer in G. Britain, than in America, and of course involves more labor and expense. Thus for the early summer crops of cabbage, the seed is sown in England in Sept., the plants subsequently pricked out, and protected during the winter; and for the autumnal crop, it is sown in February and March. While with us, the seeds of the early kinds, are sown in March and April, and those for the main crop, the last of May and first of June.

The Bean forms an important article of summer diet in both countries; but the varieties cultivated are very different. In England the cultivation is principally confined to the Broad Pods, (*Vicia Faba*) such as the Windsor, &c. and to some of the hardier Dwarf Kidneys. With us the Dwarf Kidneys are prefered to the *Vicia Faba*, and both give precedence to some of the runners, particularly to the Lima, which is esteemed above all others, and which I believe is not attempted to be cultivated in England, and certainly cannot come to maturity in that climate.

The Pea, Beet, Carrot, Parsnip, Onion, Sallad, and many other Esculents, are common to the gardens of both countries, and I will not pretend to say in which they succeed the best, under the like culture. I have noticed a remark of Mr. Knight's, that the Onion is of less size in England than in Spain and Portugal; and he makes a suggestion, that the Pennsylvania practice would be an improvement in the English culture, viz. to plant the second season the small bulbs which form the first. This practice is not known in the State of New-York, where the prevalent fear is that the Onion will grow too large in *one* season.

There are several other garden productions which enter somewhat extensively into our common diet, that the natural climate of England cannot produce, and which are there consequently limited in their culture and use. Of this Class is the Water Melon, Tomato, Pepper, Okra, Sweet Potatoe, Pumpkin, Squash, Egg Plant, Maize, &c. The superiority of our climate for these productions, over that of England, is unquestionable.

There is another consideration entitled to weight in settling the question at issue. *The amount of labor required in the two countries to bring the products of a garden to a state of maturity.* In the Middle States, gardening is a business, in general, of six or seven, and in no case more than nine months, in a year; in England it seems to form a continuous round of employment. Our summer heats accellerate the growth and maturity of garden vegetables, with ordinary labor; while it is necessary to produce the like results in England, to aid the climate by protracted and expensive operations. We have very little occasion for the artificial soils, forcing pits, fruit walls, and grape and peach houses, which occupy most of the English books upon Horticulture. The finest productions of the garden are within the reach of our most ordinary farmers, and mechanics. And yet we cannot withhold from our parent country, our admiration of her successful efforts to remedy the defects of her climate. Science, industry and perseverance, have combined to elevate her horticultural character above that of any other nation. We have learnt much from her excellent example, and there is ample room for us to profit further by it.

From the foregoing considerations and facts, I am induced to believe, that the climate of the Middle States, is better adapted to the culture of the Apple, Pear, Peach, Plum, Nectarine, Apricot, Grape, Cucumber, and Melon; the finer varieties of the Bean (*phaseolus*), the Onion, Squash, Pumpkin, Tomato, Water-melon, Sweet-potatoe, Okra, Egg-plant, and Pepper, than the climate of England is; that on the other hand, the Gooseberry, Cauliflower, Cabbage, and Brocoli, thrive best in the climate of the latter. For other productions of the garden, I do not know, that there is any material preference to be given to either.

I will close this article, which I have already extended to an unwarrantable length, with an exhibit of the average prices of garden products in the London and New-York markets, in the several months of the year. The London prices are taken from Loudon's Encyclopedia of Gardening, and I have reduced them to our currency, for the convenience of the reader. I will barely add, that the price of labor in England is less than with us, and that if the articles enumerated are grown with as great facility there, as they are here, it would seem to follow as a corollary, that they would be sold as cheap in Covent Garden as in Fulton market.

Average Retail Prices of Vegetable productions, of the best quality, throughout the Year, at Covent Garden Market, London, and at Fulton Market, New York.

The figures denote Cents.		January	February	March	April	May	June	July	August	Sept.	October	November	December
Apple, per bushel.	London	888 to 400	888 to 400	888 to 400	to	to	to	to	400 to 222	88½ "	88½ "	666 " 333	666 to 333
do. do.	N. York	100 „ 60	110 „ 70	120 „ 80	125 „ 90	125 „ 100	200 „ 150	125 „ 100	62½ " 50	75 " 37½	75 " 50	90 " 60	100 " 60
do. baking do.	London	400 „ 000	400 „	400 „	488 -	-	-	-	222 "	66 "	266 "	355 "	355 "
do. do.	N. York	50 „ 30	60 „ 35	80 „ 40	62½ - 50	62½ „ 50	100 „ 75	62½ „ 50	37 " 25	37 " 25	37 " 19	45 " 30	50 " 30
Pear, per half sieve.	London	1110 „ 000	1110 „	-	-	-	-	-	220 " 110	88½ "	444 "	444 "	444 "
do. do.	N. York	000 „ 000	-	-	-	-	-	33 „ 25	30 " 20	25 " 20	30 " 25	50 " 30	150 " 100
do. baking per dozen.	London	56 „ 000	56 „	56 -	-	-	-	-	-	-	-	33 "	33 "
do. do. do.	N. York	-	-	-	-	-	-	6½ „ 12½	15 " 10	12½ " 10	15 " 12½	30 " 25	100 " 75
Plum, per punnet.	London	-	-	-	-	-	-	111 „	111 "	444‡"	266 "	-	-
do. do.	N. York	-	-	-	-	-	-	8 „ 4	8 " 4	8 " 4	-	-	-
Peach, per dozen.	London	-	-	-	-	-	-	532 „ 265	266 " 100	90 " 24	88½ " 24	88½ " 24	-
do. per bushel	N. York	-	-	-	-	-	-	300 „ 100	400 " 100	400 " 62½	400 " 100	-	-
Nectarine, per dozen.	London	-	-	-	-	-	400 „	266 „	177 "	133 "	88½ "	-	-
do. do.	N. York	-	-	-	-	-	-	-	50 " 25	-	-	-	-
Apricot, do.	London	-	-	-	-	-	-	222 „	111 " 24	48 " 11	-	-	-
do. do.	N. York	-	-	-	-	-	-	19 „ 15	20 " 15	-	-	-	-
Cherry, per pound.	London	-	-	-	666 „	444 „	177 „	133 „	55 "	55 "	-	-	-
do. do.	N. York	-	-	-	-	20 „ 15	8 „ 4	6¼ „ 3	6¼ " 3	-	-	-	-
Gooseberry, per half sieve.	London	-	-	-	-	-	222 „	133 „	133 "	133 "	-	-	-
do. do.	N. York	-	-	-	-	-	120 „ 60	120 „ 60	-	-	-	-	-
Grape per pound.	London	-	-	-	-	774 „	666 „	333 „	177 "	111 "	111 "	111 "	-
do. do.	N. York	-	-	-	-	-	-	-	31 " 19	31 " 19	31 " 19	-	-
do. native, per bushel.	do.	-	-	-	-	-	-	125 „ 100	125 " 100	125 " 100	-	-	-
Cucumber, per pair.	London	466 „	466 „	266 „	233 „	133 „	88½ „	33 „	22 "	22 "	-	-	-
do. do.	N. York	-	-	-	38 „ 25	25 „ 18	12½ „ 6	8 „ 4	3 " 1	1 " ½	1 " ½	-	-
Melons, each.	London	-	-	-	-	-	111 „ 444	111 „ 333	111 "	66 "	66 "	-	-
do. do.	N. York	-	-	-	-	-	25 „ 12	25 „ 12	12½ " 6	8 " 4	12½ " 6	-	-
Cabbage, per dozen,	London	-	-	44 „	44 „	33 „	22 „	22 „	-	-	-	11 "	
do. do.	N. York	50 „ 25	50 „ 25	50 „ 25	50 „ 25	75 „ 50	60 „ 25	60 „ 25	75 " 31	50 " 38	50 " 25	50 " 25	50 " 25
Asparagus, per 100.	London	466 „	466 „	333 „	333 „	222 „	177 „	177 „	-	-	-	-	466 "
do. do.	N. York	-	-	-	90 „ 54	38 „ 25	31 „ 25	-	-	-	-	-	-
Cauliflower, per dozen.	London	-	-	-	-	344 „	111 „	66 „	44 "	33 "	22 "	100 "	111 "
do. do.	N. York	450 „ 150	450 „ 150	450 „ 150	-	200 „ 150	150 „ 100	-	-	150 " 100	125 " 75	125 " 75	200 " 100
Strawberries, per pottle.	London	-	-	-	-	66* „	22* „	88 „	44 "	-	-	-	-
do. do.	N. York	-	-	-	-	100 „ 62½	60 „ 30	-	-	-	-	-	-
Quinces, per dozen.	London	-	-	-	-	-	-	-	-	-	55 "	55 "	-
do. do.	N. York	-	-	-	-	-	-	-	-	-	19 " 12½	19 " 12½	-
Brocoli, per bunch.	London	22 „	33 -	44 „	55 „	66 „	-	-	-	11 "	17 "	22 "	33 "
do. do.	N. York	50 „ 33	50 „ 33	-	-	-	-	-	75 " 62½	62½ " 50	50 " 36½	50 " 25	50 " 25
Beans, kidney, per 100.	London	88 „ 33	88 - 33	88 „ 33	88 „ 33	88 „ 33	111 †„	44 „	44 "	44 "	-	-	133 " 100
do. per bushel.	N. York	-	-	-	-	-	200 „ 50	6 5 „ 16	20 " 10	20 " 10	20 " 10	-	-
Peas, per half sieve.	London	-	-	-	-	-	1332 „ 111	27 „ 22	44 "	44 "	-	-	-
do. do.	N. York	-	-	-	-	75 „ 62½	25 „ 16	20 „ 12½	25 " 16	-	-	-	-

The half sieve is stated by London to be nine or ten quarts. The pottle is two quarts. The punet is about one quart. Bunch six to eight heads. *Per doz. †Per half sieve. ‡ Per bushel.

ART. 38.—*Deep Ploughing—Furrows on the Declivities of Hills—Collecting and Spreading Manure—Sowing Buckwheat for Manure.* By A. Parmentier. [To the Editor of the New-York Farmer.]

Sir.—Having observed, in several places on Long Island, that the ploughings were not of sufficient depth, I was induced to request a gentleman of a large estate at Bedford, (near Brooklyn) to try the experiment of deeper ploughing. He began with one inch deeper only, as a greater depth at once would promote sterility, until counteracted by the influence of the atmosphere and subsequent ploughings and manurings. This gentleman has since informed me that he has succeeded beyond his expectations; his corn was visibly larger and stronger than that on the other side of the field, which was ploughed at the usual depth. His example will, I hope, be followed. When the soil is ploughed from eight to ten inches deep, it is more retentive of moisture, and consequently the crops are less liable to be injured by the heat and drought of summer; and in wet weather, the ground being more porous, the water does not remain on the surface so long. The fibrous roots also can penetrate deeper, and draw more nourishment to the plants.

I have also noticed that the furrows of declivous lands are sometimes made in the direction of the descent, instead of making them transversely in such a manner as to preserve as much good soil and manure as possible on the top. Corn and potatoes should be planted in a direction to prevent the rains from washing away the soil.

The manures that are carted in the fall upon lands designed to be ploughed in the spring, are too often spread over the ground, instead of being heaped up. When thus spread, the atmosphere and rains deprive the manure of a very great portion of its nutritious parts. It should be put in heaps and covered with dirt. If however, the ground be frozen, the saving in the fertilizing salts will more than compensate for the trouble of covering the heaps with mats made of straw tied between poles of six or eight feet long. While on this interesting subject, I cannot but express my surprise that so little attention is paid to making composts, which are the means of trebling the mass of manures, with very little expense.

Next year I hope to be able to give the result of an experiment, made at my request, by Jonathan Thompson, Esq. of New-York, on his farm at Islip, L. I. in sowing three successive crops of Buckwheat in one season. Each crop was ploughed in while in blossom. He has strong hopes of being successful, as the soil already appears to have undergone the desirable change. The quantity of seed per acre was three bushels at each sowing, which is a very cheap manure.

Respectfully,

Horticultural and Botanic Garden, Brooklyn, L.I. March 1829. A. Parmentier.

ART. 39.—Neat Cattle.—*Of the varieties and breeds of the Bull.* [Concluded from page 36.]

Of the Welsh Cattle, "there seem to be two distinct kinds. The large sort are of a brown color, with some white on the rump and shoulders, denoting a cross from the long-horns, though in shape not the least resembling them. They are long in the legs, stand high according to their weight, are thin in the thigh, and rather narrow in the chine; their horns are white and turned upwards; they are light in flesh, and next to the Devons, well formed for the yoke; have very good hoofs, and walk light and nimble. The other sort are much more valuable; color black, with very little white; of a good useful form, short in the leg, with round deep bodies; the hide is rather thin, with short hair; they have a likely look and a good eye; and the bones, though not very small, are neither large nor clumsy; and the cows are considered good milkers.

The Alderney cattle are to be met with only about the seats of a few great landholders, where they are kept chiefly for the sake of their milk, which is very rich, though small in quantity. This race is considered, by very competent judges, as too delicate and tender, to be propagated to any extent in Britain, at least in its northern parts. Their color is mostly yellow or light red, with white or mottled faces; they have short crumpled horns, are small in size, and very ill shaped; yet they are fine boned in general; and their beef, though high colored, is very well flavored. I have seen says Culley, some very useful cattle bred from a cross between an Alderney cow and a short horned bull.

The Irish cattle, Culley thinks, are a mixed breed between the long-horns and the Welsh or Scotch, but more inclined to the long-horns, though of less weight than those in England.

The last variety of cattle we shall mention is one entirely of luxury, it is the *wild breed,* which is found only in the parks of a few great proprietors, who preserve the animals as curious and ornamental, or for the sake of their high-flavored beef. Those kept at Chillingham Castle, in Northumberland, a seat belonging to the earl of Tankerville, have been very accurately described in the *Northumberland Report,* and in Culley's book on live stock, so often quoted. Their color is invariably of a creamy white; muzzle

black; the whole of the inside of the ear, and about one-third of the outside, from the tips downward, red; horns white, with black tips, very fine, and bent upwards; some of the bulls have a thin upright mane, about an inch and a half, or two inches long. The weight of the oxen is from thirty-five to forty-five stone, and the cows from twenty-five to thirty-five stone the four quarters (fourteen pounds to the stone). The beef is finely marbled, and of excellent flavor. From the nature of their pasture, and the frequent agitation they are put into by the curiosity of strangers, it is scarcely to be expected they should get very fat; yet the six years old oxen are generally very good beef, from whence it may be fairly supposed that, in proper situations they would feed well.

The habits of these animals are entirely rude; at the first appearance of any person they set off in full gallop, and, at the distance of about two hundred yards, make a wheel round and come boldly up again tossing their heads in a menacing manner; on a sudden they make a full stop, at the distance of forty or fifty yards, looking wildly at the object of their surprise, but, upon the least motion being made, they all again turn round, and fly off with equal speed, but not to the same distance, forming a shorter circle, and again returning with a bolder and more threatening aspect than before; they approach much nearer probably within thirty yards, when they again make another stand, and again fly off: this they do several times, shortening their distance, and advancing nearer and nearer till they come within such a short distance, that most people think it prudent to leave them, not choosing to provoke them farther.

When the cows calve, they hide their calves for a week or ten days in some sequestered situation, and go and suckle them two or three times a day. If any person come near the calves, they clap their heads close to the ground, and lie like a hare in form, to hide themselves. This is a proof of their native wildness, and is corroborated by the following circumstance that happened to the writer of this narrative (Bailey, of Chillingham,) who found a hidden calf, two days old, very lean and very weak. On stroking its head it got up, pawed two or three times like an old bull, bellowed very loud, stepped back a few steps, and bolted at his legs with all its force; it then began to paw again, bellowed, stepped back, and bolted as before; but knowing its intention, and stepping aside, it missed him, fell, and was so very weak that it could not rise, though it made several efforts; but it had done enough; the whole herd were alarmed, and, coming to its rescue, obliged him to retire; for the dams will allow no person to touch their calves without attacking them with impetuous ferocity.

When a calf is intended to be castrated, the park-keeper marks the place where it is hid, and when the herd are at a distance, takes an assistant with him on horseback; they tie a handkerchief round the calf's mouth to prevent its bellowing, and then perform the operation in the usual way, with as much expedition as possible. When any one happens to be wounded, or is grown weak and feeble through age or sickness, the rest of the herd set upon it and gore it to death.

The mode of killing them was, perhaps, the only modern remains of the grandeur of ancient hunting. On notice being given that a wild bull would be killed on a certain day, the inhabitants of the neighbourhood came mounted and armed with guns, &c., sometimes to the amount of an hundred horse, and four or five hundred foot, who stood upon walls or got into trees, while the horsemen rode off the bull from the rest of the herd, until he stood at bay, when a marksman dismounted and shot. At some of these huntings, twenty or thirty shots have been fired before he was subdued. On such occasions, the bleeding victim grew desperately furious from the smarting of his wounds, and the shouts of savage joy that were echoing from every side. But, from the number of accidents that happened, this dangerous mode has been little practised of late years, the park-keeper alone generally shooting them with a rifle gun at one shot.

Of Fattening Horned Cattle.

The fattening of cattle demands considerable and constant attention, and the grand object is to fatten quickly. An animal when in a state of rearing may be considered as a vessel open at both ends, in which the supply and the waste being nearly equal it can never be filled; fattening an animal may be considered as an attempt to fill the vessel, and which can only be done by excess of supply. The waste being the same as before, this excess must be great; if it is not so, the vessel may be rendered fuller than before without ever becoming full. An important hint might be taken from this simile by many farmers, who know little of the difference between feeding and fattening. We have known cattle, sheep, and swine, kept for months and fed, with a view to fattening them, without their gaining a pound of meat.

The food on which cattle are fatted, is grass in summer, commonly on pastures, but in a few instances on herbage cut and consumed in feeding-houses or fold-yards; and in winter, by far the greater number are fatted on turnips, along with hay or straw, oil-cake; carrots, potatoes, and other articles of food, are used occasionally, and in particular districts; oil-cake chiefly for feeding the larger animals; but few, comparatively, are fatted on any of these without the addition of turnips, of one or other of the varieties formerly mentioned. A considerable number of cattle are also fatted on the offals of distillers, when distilling from corn; a source of supply, the frequent in-

terruption of which has been much felt in those situations where the soil does not permit the extensive cultivation of turnips. It is seldom or never the practice of the best managers to fatten cattle with roots or other winter food on the field, during that season; but to confine them to houses or fold-yards, where they are well litered, regularly fed, not liable to be disturbed, and sheltered from the inclemency of the weather, and where the manure they make is an object of very considerable importance, and of much greater value than if it were dropped at random over a whole field.

The age at which cattle are fatted depends upon the manner in which they have been reared; upon the properties of the breed in regard to a propensity to fatten earlier or later in life; and on the circumstances of their being employed in breeding, in labor, for the dairy, or reared solely for the butcher. In the latter case, the most improved breeds are fit for the shambles when about three years old, and very few of any large breed are kept more than a year longer. As to cows and working oxen, the age of fattening must necessarily be more indefinite: in most instances the latter are put up to feed after working three years, or in the seventh or eighth year of their age. In general, it may be said, that the small breeds of cattle are fattened on pastures, though sometimes finished off on a few weeks' turnips; and that large cattle, at least in the north, are chiefly fatted in stalls or fold-yards, by means of turnips, and the other articles before mentioned.

Stall-feeding is the most common, and, when judiciously conducted, probably the most eligible method, in regard to the cattle themselves, the economy of food, and the expense of farm-buildings. The small shed and fold-yard, called a *hammel*, are used only for the larger breeds; but they do not seem well calculated for an extensive system of fatting by those who do not breed, but purchase stock every year from different parts.

The two great points in feeding animals, to proof, according to the author of the *Farmer's Calendar*, are, regularity, and a particular care of the weaker individuals. On this last account there ought ever to be plenty of trough or rack-room, that too many may not feed together; in which very common case the weaker are not only trampled down by the stronger, but they are worried, and become cowed and spiritless, than which there cannot be a more unfavorable state for thrift; beside, these are ever compelled to shift with the worst part of the meat. This domineering spirit is so remarkably prevalent amongst horned cattle, that he has a hundred times observed the master-beasts running from crib to crib, and absolutely neglecting their own provender for the sake of driving the inferior from theirs. This is, much oftener than suspected, the chief reason of that difference so visible in a lot of beasts, after a winter's keep. It is likewise, he says, a very common and very shameful sight, in a dairy of cows, to see several of them gored and wounded in a dozen places, merely from the inattention of the owner, and the neglect of tipping the horns of those that butt. The weaker animals should be drawn and fed apart; and in crib-feeding in the yard, it is a good method to tie up the master-beasts at their meals.

Fattening cattle, Donaldson observes, are usually put to grass in May or June, according to the season and situation in regard to climate. The period necessary for fitting an ox for the butcher depends on several circumstances, as the condition he was in when put to grass, the nature of the pasture, and many others; but, in ordinary cases, an ox will be completely fattened in three months. There is, he says, one method of fattening, connected with the grazing system, that the farmers in England are enabled, from the superior excellence of the climate, to adopt with success, which can never be attempted with propriety in Scotland. It is very common, at the close of the grass season, when the fattening stock happen not to be fully in condition for the butcher, to render them so, by giving them hay two or three times a day in the field, or in hovels erected for the purpose, into which they have access at pleasure.

When turnips are employed for the purpose of fattening cattle, especially if they are put up to the stalls in proper condition, which, considering the season of the year (November,) must, with ordinary attention, always be the case, from ten to thirteen weeks is fully sufficient to render them fit for market.

The fattening of cattle with grains may, in some respect, be considered as a branch of the distillery business; but yet there are some instances wherein those who cultivate farms practise it with a double view—of obtaining a profit on the sale of cattle, and the acquisition of a valuable treasure of useful manure. Adam, the renter of the farm of Mount Nod, near Streatham, in the county of Surrey, erected a very complete building, for the purpose chiefly of fattening cattle on grains. In this building might sometimes be seen several hundred head of cattle.

The method of fattening cattle with oil cake, corn, cut chaff, &c. is practised in many of the English counties, with a degree of success sufficient to warrant farmers in other parts of the island to follow the same practice. The cattle are commonly put up to fatten at the end of the grass season. The usual allowance of oil-cake, after it is broken in a large mortar, or in the fruit districts in a cyder-mill, is about half a peck per day, which is given, one half in the morning, and the other in the evening; to which is

added hay, and in some cases ground corn, that is, oats or barley of inferior quality, and cut straw—provincially "chaff." As bullocks fattened in this manner get regularly five, and sometimes six meals a day, it is sufficiently evident that, although it may be upon the whole an expensive mode of fattening, yet it must be both expeditious and effectual.

ART. 40.—*Foreign Plants that have withstood the present severe winter at the Linnæan Botanic Garden, near New-York.* [To the Editor of the New-York Farmer and Horticultural Repository.]

Dear Sir,—The past winter having been very severe, it is interesting to know what foreign plants, heretofore considered tender, have become so acclimated as to have withstood its rigours; and I have therefore to state, that the following are among the number:—*Pæonia montan Banksii, rosea,* and *papaveracea,* without any protection. *Camellia japonica,* the single, and some double varieties, in mere wood frames without glass; the ground froze round them four to five inches deep without injury. *Azalea indica purpurea pleno* withstands the severest cold, which is a curious and unexpected circumstance; *Glycine vel Wisteria sinensis, Magnolia purpurea* and *Conspicua of* China, *Geranium macrorhizon* all withstood the cold perfectly, and the *Lavandula dentata* were planted in a dry soil. French Grape Vines of three years growth are uninjured; those of less age it is prudent to cover with earth, though not always necessary.

The English Laurel *Prunus Lauro-cerasus* is killed nearly to the ground, but in such cases it throws up strong shoots again from the roots.

Nearly all the varieties of *China Roses* stand our winters, and even the most delicate will support the cold if three or four inches of tanners bark is spread around them.

The Chinese Evergreen Honeysuckle, *Lonicera Sinensis* is as hardy as an Oak, it holds its foliage throughout the winter, and blooms profusely with delightful striped flowers in April; the *Lonicera Japonica* is much more tender, and was killed nearly to the ground; *Lonicera implexa* stands the cold well. I think the Chinese Honeysuckle one of the most valuable novelties our gardens can boast.

Gricilles Superb Rose is among those that have withstood the cold best. It is at the south side of the house, and seems perfectly uninjured.

I will at another moment continue these remarks.

Yours respectfully,

Wm. Prince.

Linnæan Botanic Garden, near New York.
March 14, 1829.

ART. 41.—*On the Cultivation of Rhubarb for Medicinal Purposes in the United States.* By the Editor.

When passing through one of the northern counties of this State last summer, a farmer showed us a considerable quantity of Rhubarb root of his own raising, which he had in vain endeavoured to sell to the physicians. Their objection to it, was, that its medicinal qualities were not equal to the imported. The best way to prove the probable fallacy of this opinion is, we are inclined to think, to give a short history of its successful cultivation in Great Britain.

Rhubarb, *Rheum palmatum,* is considered to be a native of Tartary. About the beginning of the present century, nearly one million of dollars were annually spent in the importation of this root into Great Britain. In 1762 Dr. Mounsey introduced the seeds from Petersburgh. They were soon distributed into the hands of distinguished and enterprising gentlemen in various parts of the Island, particularly of Scotland, by whom the plant was cultivated, and pronounced to be in every respect equal to the imported. Soon after, it was raised in the Botannic Garden at Cambridge, and many gold medals were given by Societies for its successful culture. Although favourable opinions were pronounced by botanists and physicians, yet for a number of years, a strong prejudice against the Rhubarb of native growth prevented its general use. In 1784, twenty-two years after its introduction by Dr. Mounsey, most of the apothecaries in Edinburgh used it as a substitute for the imported: and for several years previous, no other had been used in the Infirmary. But it was not until about the year 1801, when some interruption was put to its importation by the Russian government, from that country, that the attention of the British public was drawn to the importance of encouraging its domestic growth. Since that period its cultivation has greatly increased.

Although we find in English works, the testimony of able physicians in favour of their Rhubarb, still there is some diversity of opinion. "The Society of Arts," says Loudon, (p. 871.) "exerted themselves for many years to promote the culture of this plant, as did Dr. Hope of Edinburgh. It has accordingly been cultivated with success both in England and Scotland; though the quality of the root produced is considered by the faculty as inferior to that of the Russia or Turkey Rhubarb, probably, as Professor Martyn thinks, owing to the moisture of our climate, and the imperfect mode in which it has been dried." This difficulty does not exist in our climate.

The following extract on the culture of Rhubarb is from the Young Gardener's Assistant, by T. Bridgeman.

Rhubarb is a genus of exotic plants, comprizing seven species, of which the following are the principal:—

1. The *Rhuponticum* or Common Rhubarb, a native of Thrace and Syria, which has long been cultivated in British gardens for the footstalks of the leaves, that are frequently used in pies and tarts.

2. The *Rheum Undulatum* is also cultivated for the same use.

3. The *Palmatum* or True Officinale Rhubarb, is a native of China and the East Indies, whence its culture has been introduced into Europe; it produces a thick fleshy root, externally yellowish brown, but internally of a bright yellow colour streaked with red veins. It grows to good perfection in Scotland as far North as Perthshire, (Lat. 56;) also in England, Turkey, and various other parts of Europe. When the importance of this root is considered as a medicine, it is a matter of astonishment that it has not been more generally introduced into the United States.

The several kinds of Rhubarb may be propagated by offsets, taken from the roots early in the spring; or from seed sown late in the fall, or in March and the early part of April. The indispensible points to the production of good roots of the *palmatum*, are depth and richness of soil, which should be well pulverized before the plants are set out. Prepare beds of fine mould eighteen inches deep; in these put in the plants from the seed bed, ten or twelve inches apart; this must be done when they have attained the height of four or five inches, and have thrown out as many leaves.

The first season is the most critical, and much care is necessary. If the weather be hot, the nursery must be shaded, and at all events continually watered; for water, *though hurtful to old plants*, is now of the first consequence. Wet weather is the most proper time to plant in. The beds must be kept free from weeds through the summer, and on the approach of severe weather, covered up with dry litter. In the early part of the spring this must be taken off, and in the beginning of April the plants must be transplanted into ground dug and prepared as directed for Asparagus. Those who cultivate the Palmatum for the sake of the roots, should dig the ground two or three spades deep, and place the plants four feet apart every way. As to the other kinds it is not so particular, so as the plants have room to grow. In the early part of November, the leaves being then decayed, the beds should be covered with dry litter; before this be done, a little earth should be drawn round the crowns of the plants. If there be any danger of water lodging, make trenches to carry it off. In the month of March the beds should be stripped of their covering, and the ground well hoed and cleared of weeds. If Rhubarb stalks be required for use early in the spring, they may be obtained by placing flower barrels or deep tubs over some of the plants, and covering them up with fresh stable dung. Some make the beds at once with the seeds; the objections to this plan are, first, that the young plants cannot be so well protected in the early part of their growth as those raised in small beds; and, secondly, that the ground becomes so hard in the course of a year as to prevent the roots from running to the depth they otherwise would.

The roots of the Palmatum must not be taken up until six or seven years old. The stalks of the other kinds may be cut every spring. After being stripped of their outer covering and cut up into small pieces, they are used in pies and tarts. Cobbet supposes, "that a hundred wagon loads of Rhubarb stalks are annually sold in the markets of London, at a shilling sterling per bunch." (American Gardener.) Rhubarb makes an excellent preserve when cut into small pieces about an inch and a half long, and parboiled with sugar.

After the plants have obtained from three to eight years growth, the roots are taken up, and immediately cleared by a hard brush from the dirt, and then washed in water. They are then dried as soon as possible. The small fibres are cut off of the large roots. These are then cut transversely into pieces of about two inches thick, and then further dried on boards, turning them several times a day, in order to prevent the escape of the yellow juice on which its medicinal qualities depend. In four or five days, they are strung upon strings and suspended in the air and wind, and protected from the sun. In England they have large houses built for curing and drying the roots.

ART. 42.—*The Planting of Timber in Europe—and the cultivation of the Sugar Maple, and of Live Fences in the United States.*—By J. BUEL, of Albany.—[For the New-York Farmer.]

"I am but one year old," was the response of an aged Persian to the interrogatory of his monarch—"for it was but last year that I began to live for posterity *by planting out a tree.*" When we consider that *all* the woods of Great Britain have been sown or planted by the hand of man, and witness the rapid diminution of our primitive forests, we cannot but appreciate the sentiment of the old Persian, and feel the propriety of imitating his example. The planting and preservation of timber forms now, in Europe, an important branch of national economy. This highly commendable feeling of planting for posterity, particularly distinguishes the Pomological associations of Germany. An idea of their labors and usefulness

may be formed from the declaration of Mr. Loudon, the enlightened editor of the Encyclopedia of gardening and agriculture, that in October last he travelled "*for six days along a winding avenue of* FRUIT TREES, upwards of 250 miles, (from Strasburg to Munich,)" consisting of the apple, cherry, pear, plumb, and black-walnut. What a delightful feature must this form in the rural scenery of the country, during the seasons of blossoms and of fruits. And how easily it might be initiated in the old settlements of our country. The people of Massachusetts are entitled to much credit for their early attention to this subject. While a laudable emulation prevails in transforming their highways into *avenues of trees*, useful as well as ornamental, the state Agricultural society is encouraging the cultivation of live fences, and the sowing and planting of forest trees, by the distribution of liberal premiums, furnished in part by munificent appropriations from her state treasury. New-York is great in every thing but her agricultural policy.—Here agriculture, like a forsaken orphan, is left to struggle without parental care. There is more truth than patriotism in the remark once made by a member of the committee on agriculture, in our legislature, that he was opposed to any appropriation from the treasury for agricultural improvements because HE was too old to profit by it, and because he wished to keep things to his own level.

I began these remarks with the view of recommending to our farmers the cultivation of the sugar maple as a means of embellishing and enhancing the value of their estates, of multiplying their personal comforts, and in fulfilment of a duty to posterity. The subject was suggested by reflecting on the commendable beginnings which I witnessed last summer in different parts of the state,, and particularly in the county of Lewis, of making plantations of this valuable tree. The attempts to preserve the forest growth of this tree have been unavailing. The trees are soon prostrated by winds when the other wood is taken away, and the lands around cleared. But when set out, of proper size, their habits early conform to their location. I saw many acres planted at regular distances, besides avenues of them on the highways. The only faults I noticed were, in selecting tall trees from the forest, instead of more humble ones from the borders and fields, and in divesting them too much of their branches.

The sugar maple is one of our most valuable trees for use and ornament. Its *sap* affords an article of indispensable family use, which is manufactured at the most leisure season of the year. Its *timber* is valuable for the cabinet maker and the carpenter, and ranks next to hickory as fuel; its *shade* is umbrageous and refreshing; its *form* symmetrically beautiful; and its *growth* is perfected in almost every soil. A plantation made upon the north or bleak side of the farm buildings, or the fruit orchard, or in belts around permanent enclosures, is highly useful as a protection; constitute a most interesting feature of rural scenery, and will ultimate in substantial profit to its proprietor. The grounds planted are but very little injured, at least for years, for ordinary purposes of tillage or grass. In districts where the maple is not of indigenous growth, or where suitable trees cannot be obtained for a plantation, the defect might soon be remedied by planting a nursery.—Seeds may be gathered by bushels at the time of the early autumnal frosts, or obtained from seedsmen in our cities. They should be sown in the fall or spring, after gathering, upon a bed of good mould, slightly covered, and kept free from weeds. They generally will not grow until the second season. After standing in the seed bed two summers, they should be transplanted into nursery rows, and there nursed till they have acquired size for final planting.

Another subject interesting to the present, as well as to the rising age, is the cultivation of live fences. It is evident that the practice in Great Britain of planting these upon a bank of earth, and on the border of a ditch, is adapted neither to the dry summers nor cold winters of our climate. Nor has our experience yet indicated, with any degree of certainty the plants best adapted to general use. Yet if the information upon this subject, which experience has suggested to individuals, was collected and concentrated, a tolerable system of management might be formed. I would therefore respectfully invite gentlemen who possess practical knowledge, to communicate to the Farmer every information which may tend to accellerate our progress in this useful branch of improvement. J. BUEL.

Albany, March 13th, 1829.

ART. 43.—*Olla Podrida.* By the EDITOR.

Blanching.—This is an operation, for giving a peculiar and delicate whiteness to plants, and for depriving them of their bitter qualities. It is done by earthing the stems of plants, by tying up their leaves, or by covering them from the light. In earthing annuals, the earth is drawn up to press on the leaves as they grow. Perennials are covered with loose earth before the growing season, and as they shoot up, are whitened. Lettuce, Endive, &c. are sometimes blanched by tying the leaves together, in such a manner as to exclude the light from the inner leaves. By this operation the fasciculus becomes both tender and solid.

Laying slates, pieces of board, &c. on endive and other salads, when nearly full grown, excludes the light

and thus renders colorless the parts that are covered.

Sorrel.—The leaves of the common sorrel growing in the fields, as well as that cultivated in gardens, make very fine pies. They are prepared similar to the leaves of rhubarb. They are also good for greens.

Artichoke.—The flower heads in an unripe state contain the fleshy receptacle which is used. They are fried in paste, sometimes used for pickling, dried in bags for winter use, and eat in a raw state as a salad. The flowers possess the property of coagulating milk, and answer as a substitute for rennet.

Hops.—The young shoots when three or four inches in height, are sometimes boiled like asparagus, and said to be little inferior.

Endive.—This is a hardy annual, and a native of Japan. The leaves form a large stocky head, and when blanched, are in much repute as salad and stews in spring, autumn and winter.

Dandelion.—The unfolding leaves afford a very good ingredient in salads. The French use the young roots, and the etiolated leaves with slices of bread and butter. The root is used as a substitute for coffee.

Celery.—This is a hardy biennial plant. The blanched leaf stalks are a very excellent raw sallad; stewed they are put in soups. In Italy the seeds are bruised and form a good substitute for the blanched leaves. The Germans use the roots of the variety called celeriack with oil and vinegar, first boiling them and then suffering them to become cold.

Mustard.—The white mustard (*Sinapis alba*), when young, is a mild and tender salad, used like cresses. The tender leaves of the black mustard (*S. nigra*) are excellent greens. The seed leaves are also used like cresses.

Fennel.—The boiled leaves are used in fish sauces; and the tender stalks as salads.

Different plants require different soils; some flourishing in sandy, some in clayey, some in moist, some in dry soils; some in warm, some in cold situations. Many grow only in water—and a few subsist in the atmosphere.

Edible Wild Plants. It is supposed that all vegetables, not absolutely poisonous, may be rendered edible by proper management. This will appear evident when we recollect that many plants considered noxious in their native state, have become, by cultivation, highly nutri ious. The potatoe is an instance. And when their qualities cannot be materially improved by culture, the addition of sauces, of other vegetables of different flavor, and spices, they are rendered palatable. This is a subject worthy the attention and study of horticulturists of this country in particular.

Substitutes for Tea. The leaves of the red raspberry, properly prepared, have a flavor so much resembling the imported teas that young ladies cannot discover the difference. Speedwell, *Veronica spicata.* Spring Grass, *Anthoxanthum odoratum*, and leaves of the black current are also substitutes. The Thick-leaved Saxifrage, *Saxifraga crassifolia*, is used in Siberia as tea. The Wood Betony, *Betonica officinalis*, is said to have the good qualities of the foreign tea, without the bad ones.

Gum of the Cherry Tree.—The exuding gum from the cherry tree is thought to be equal to gum arabic. Hasselquist relates that more than one hundred men, during a siege, were kept alive for nearly two months on this gum alone, taken in the mouth and suffered gradually to dissolve.

The Tomatoe, or Love Apple is much cultivated for its fruit in soups and sauces, to which it imparts an agreeable acid flavour; and is also stewed and dressed in various ways, and very much admired.

The seeds should be sown the early part of March, in a slight hotbed, and the plants set out in the open ground the first week in May. In private gardens it will be necessary to plant them near a fence, or to provide trellices for them to be trained to, in the manner recommended for Nasturtiums; they will however do very well if planted out four feet distant from each other every way.

Tomatoes may be brought to perfection late in the summer, by sowing the seed in the open ground the first week in May; these plants will be fit to transplant early in June. [*Young Gardener.*

The Carrot.—Parkinson observes, that in his day the ladies wore carrot leaves instead of feathers. By cutting off a portion of the larger end of a carrot, and placing it in a shallow vessel of water, a handsome tuft of radiate leaves is soon unfolded.

The White Beat.—The *Beta cicla* is raised in gardens for its leaves, which are boiled as spinage, or put into soups. The leaves of the large white sweet beet are esteemed for the stalks which are prepared and eaten like asparagus.

Asparagus is used in Paris by the sedentary operative classes, who are inclined to the gravel or stone.

Pumpkins.—In some country villages in England, says Louden, the inhabitants grow pumpkins on dung hills and train the vines to a great length. When the fruit is ripe they cut a hole in one side, take out the seeds, fill the void space with apples, and then baking the whole together, eat it with butter.

Buck-wheat in England is used almost entirely for feeding swine, poultry, pigeons, and sometimes horses. In some parts of England, says Withering, buck-wheat flour is made into thin cakes, which are thought to be nutritious. But thousands in England never heard of buck-wheat cakes being eaten by man, and thousands in New England never tasted them.

ART. 44.—*Cultivation of Sea-Kale.* [From the Young Gardener's Assistant.]

This plant is found on the sea shore in the Southern parts of England, where it grows spontaneously. As soon as it appears above ground, the inhabitants remove the pebbles or sand with which it is usually covered to the depth of several inches, and cut off the young and tender leaves and stalks, as yet unexpanded, and in a blanched state, close to the crown of the root, it is then in its greatest perfection. When the leaves are full grown they become hard and bitter, and the plant is not eatable.

It is cultivated in private gardens and for sale in various parts of England. Cultivators have differed widely respecting the mode of treating this plant, many conceiving that stones, gravel, and sea sand are essential to its growth, have gone to the expense of providing it: but it has been discovered that it will grow much more luxuriantly in a rich sandy loam, where the roots can penetrate to a great depth.

The seeds of Sea-Kale should be sown as soon as they are ripe. If fresh seeds cannot be obtained by the end of October, let them be sown as early in the spring as the ground can be brought into good condition, in drills an inch and a half deep, and fourteen or sixteen inches asunder; the plants should be afterwards thinned out to the distance of six or eight inches from each other in the rows, and kept clear of weeds by frequent hoeings through the summer. When the plants are a year old, every third row may be taken up, and also every other plant in each row, leaving them fourteen or sixteen inches apart; these may be transplanted into good ground prepared as directed for Asparagus. Plant two rows in each bed, about eighteen inches apart; the best way is to make two drills three inches deep, and with a dibble set in the plants fifteen or sixteen inches from each other; when these drills are filled, the crowns of the plants will be covered nearly two inches, but they will soon push through the earth. The plants left in the seed bed may form a permanent bed, which should be forked or dug between the rows; previous to this being done, lay on an inch or two of good rotten manure, and incorporate it with the earth around the plants.

Some make new plantations with pieces of old roots, which should be cut up in lengths of about two inches, and planted in March or April, three or four inches deep at the distances before directed for the plants.

At the approach of winter, the leaves will die away and disappear. The beds should be then thickly covered with dung, leaves or sea weed; this will not only protect the plants from frost, but will cause them to shoot up early in the spring. As soon as the frost is out of the ground, this may be taken off, or if well rotted, it may be mixed up with the earth: the crowns of the plants should then be covered to the depth of ten or twelve inches for blanching.

Some blanch it by heaping on it sea sand; some, common sand and gravel; and others with large garden pots inverted, and placed immediately over the plants. If these pots be covered up with fresh horse dung, it will forward the shoots in growth, and make them sweeter and more tender.

When your plants have been covered in either method three or four weeks, examine them, and if you find that the stalks have shot up three or four inches, you may begin cutting; should you wait till all the shoots are of considerable length, your crop will come in too much at once, for in this plant there is not that successive growth which there is in Asparagus; you may continue cutting until you see the head of flowers begin to form; and if at this time you uncover it entirely, and let it proceed to that state in which Brocoli is usually cut, and use it as such, you will find it an excellent substitute; and this greatly enhances the value of the plant, as Brocoli does not stand our winter frost, and can only be had when carefully protected, (as recommended under that head;) but this plant is sufficiently hardy to bear our winter's frost without much injury. You are not to weaken the roots too much by over-cutting, for in that case it would injure their next years bearing; some of the shoots should be allowed to grow to carry on a proper vegetation, to strengthen and enlarge the roots. Great care should be taken in cutting, not to injure the crowns of the roots by cutting the shoots too close to them. Sea-Kale should be dressed soon after it is cut, as the goodness of the article greatly depends on its not being long exposed to the air.

ART. 45.—*Answer to the Query of "An American," respecting the Vine best adapted to this Country.*

Mr. Editor,—I will endeavour to satisfy your Correspondent "*An American*" as he signs himself in your number of last month, as to what kind will succeed best," to use his own words in the question put to you.

In your number for April and May in last year, I read what I considered at the time, and still think so, the best information on this subject which has fallen in my way.

The experience and observation detailed by Mr. Allen, the writer of the letter to which I allude, and also of a subsequent one in one of your late numbers, appear to me to furnish clear proofs, that as far as experiments in other climates can justify a fair ex-

pectation of success in this country on a large scale, the Burgundy and Madeira vines mentioned by him, are those of which common prudence would dictate the choice.

I am confirmed in this opinion, also, from some extracts which I remember to have read in the Southern Agriculturist, in which I remarked at the time, that one of our modern cultivators of the vine to the Southward mentions the Madeira grape as having succeeded perfectly in its wine; as also another grape which he calls "*Le Noir*," and which I consider to be an abreviation of the name of Burgundy species, called by one of the French writers "*Le* (Bourguinon) *Noir*," or the Black Burgundy.

This circumstance, together with the numerous examples mentioned by Mr. Elderton Allen, of the uniform success which had attended the transplantation of the Burgundy and Madeira grapes in various climates, induce me to venture to recommend these two as the kinds which will be most likely to succeed best here, from the plain and almost unanswerable argument, that they have been tried and have succeeded almost every where. Add to which, I am confidently informed, and that from most unquestionable authority, that of the different varieties and shades of generalities of the French wines which are produced in the several departments of France, and to which names have originally been given at the caprice of the proprietors, or from accident or local circumstances, are the far greater part the produce of a Burgundy grape, of which I understand there are two superior varieties, called the Pinean, the one of cone or pine-apple shape, as to the berry, but the other not so, (though it bears the same name,) and of inferior quality to the former.

The "Bourguinon noir" is the next best, perhaps, of all the imported sorts, if *wine* is the object of your querist, and which I presume it to be.

A READER.

ART. 46.—*On the Cultivation of Flax Seed without reference to the Linen Fibre.*—By C. E RUGGLES. [For the N. Y. Farmer.]

However chimerical or unprofitable this subject may appear to some, particularly to the farmers who, either by inheritance from their industrious forefathers, or from want of observation, know of but one routine of successful agriculture, the writer could nevertheless recommend at the present high state of the flax seed market, both for exportation and home consumption, the sowing of flax for the purpose of obtaining a crop of the seed alone. When sowed for this object alone, it will produce a sufficient quantity to render it profitable, for when sowed and cultivated in the common way, only about ten bushels of seed is produced from an acre, and it often happens the farmer is obliged to secure his crop of flax, before the seed has yet formed, or risk the whole, together with his labour and other expenses. It is not to be expected that the fibre and seed can, with equal perfection, be both saved at the same time: but it is contended, that by careful experiment and observation, it will be found much more profitable to sacrifice the fibre for the seed, than to neglect the seed for the sake of the flax. At the present state of things, the want of proper facilities in spinning and manufacturing linen, and the great labour required in preparing it for market, render it almost impossible for our farmers to realize a profit from its cultivation. We will, for example, suppose one acre of ground cultivated in the ordinary manner, to produce one and a half tons to the acre of the flax as taken from the ground, which qnantity must be the produce of a very good crop; allow from this one fourth to be fibre or flax after dressing, (as is customary,) would leave seven hundred and fifty pounds of flax, and deduct therefrom one half for breaking, hackling, dressing &c., and there remain three hundred and twenty-five pounds; suppose it to bring the highest market price of American flax, which at the present season, and for several prior years, has not exceeded nine cents the pound, which would be . . $29 25

Suppose you save even ten bushels of seed at 12*s*.	15 00	
Making for the whole crop raised .		44 25
Now calculating the use of the land to be	3 00	
Manure for the same . .	4 00	
2 ploughings with man and team at $1 50 per day . .	3 00	
2 harrowings . . .	1 50	
The seed, 4 bushels sown as is customary at 12*s*. . .	6 00	
Say the sowing $1, harrowing to cover the seed . . .	2 00	
Say for cost of pulling out the weeds and attendance. .	1 50	
Then allow a man to pull 1-4 an acre per day would be . .	3 00	
Binding, carting to the barn threshing, &c.	2 50	
Parting again to rot and spreading the same three days . .	2 25	
3 days gathering it up and carting to the barn	2 25	
Making the expenses without allowing for any contingent expenses to be	24 00	
Deduct		24 00

Leaves a profit for the farmer of .		20 25
Suppose, as is the case, twice out of three times no seed at all is saved .	10 00	
And there remain only *for the average of three years*	10 25	

On the other hand, in estimating the expense and the produce of seed, I shall take into consideration the quality of the ground required, the labour in tillage, the smaller quantity of seed sown, and the greater certainty of the crop: also showing by the following mode of cultivation an income of net produce exceeding the former by about $5 when seed is saved, and when not, $15 to every acre cultivated. Estimating the quantity of seed produced at twenty-five bushels, (which is by no means overated, having known thirty obtained off one acre in a season,) would be $37 50

Say for the use of the land .	3 00	
1 Ploughing	1 50	
1 1-2 bushels of seed sown .	2 25	
Harrowing this in and sowing, say	2 00	
Cradleing it when fully ripe, 1 day	1 25	
Binding, Carting to the barn, &c.	1 25	
2 days work threshing and cleaning the same, at 6s. . .	1 50	
		12 75
		24 80

I may add to this amount gained, the price of one ton of straw or flax after the seed is taken off, which all horned cattle are fond of; and when it is cut up in a common straw cutter, does not prove in the least injurious to them, but is quite nutritious.

Deduct the expense of cutting this up, which will be found very necessary as experience has shown, that flax fed to oxen and cows is apt to choak them. The reason of sowing a much less quantitity of seed for the purpose of having a greater crop of seed in return, will appear obvious to every person, as it not only gives more room for the growth of the stalk, but also for the manifold branches projecting from each, consequently a greater number of capsules are formed, and more seed is produced than when sown very thick: for only from three to six capsules are produced on one stalk, while the capsules or bowls on a stalk standing alone, or with sufficient room, amount sometimes to twenty in number. When flax is sown for the fibre alone, due regard should be had to the fineness of the linen wanted, and consequently the quantity of seed for an acre of ground.

The finest linen raised in Ireland, is sown at the rate of nine bushels to the acre, which is pulled and manufactured at two distinct states of its growth. That which is intended for the finer or lighter fabrics, is pulled in the blossom, the second when the seeds are in their milk, or before they become hardened or ripe. When secured in the first state, it requires much more care and labour to prepare it for use than in the mode practised by us, in order to preserve the delicate fibre from being injured, either by too much or too little rotting, or from being injured in the breaking and dressing process. All this may answer where it is practised, because of the comparative cheapness of labour, &c. than with us, but it is confidently hoped and believed, that at no distant day, we will have ample machinery in operation, both for breaking and dressing the raw material, as well as for spinning the flax; which last object the late invention of Messrs. Hunt and Hoskins has very greatly promoted. But until some thousands of linen spindles are in successful operation, the enterprising agriculturist cannot safely depend upon a market to make it expedient or profitable to cultivate flax except for seed and fodder.

"Be not afraid of trying experiments, but let them be on a small scale at first, and few at a time."

ART. 47.—*Prices of flour in Philadelphia for the last forty-four years.*

A table of the prices of flour in the Philadelphia market for the period of forty-four years, will be a curiosity, as well as a useful document to every dealer in the article.

1785	$5 87	1807	$7 17
1786	5 66	1808	5 69
1787	5 25	1809	6 91
1788	4 81	1810	9 37
1789	5 20	1811	9 95
1790	5 56	1812	9 83
1791	5 22	1813	8 92
1792	5 25	1814	8 60
1793	5 90	1815	8 71
1794	6 90	1816	9 78
1795	10 60	1817	11 69
1796	12 50	1818	9 96
1797	8 91	1819	7 11
1798	8 20	1820	4 72
1799	9 66	1821	4 78
1800	9 86	1822	6 58
1801	10 40	1823	6 82
1802	6 90	1824	5 62
1803	6 73	1825	5 10
1804	8 22	1826	4 65
1805	9 70	1827	5 23
1806	7 30	1828	5 60

Aggregate average of 44 years, $7 42.

The circumstances which have produced the principal fluctuations, are given as follows, by the gentleman who has carefully preserved the record. "From 1794 to '96, scarcity in France and England; from '98 to 1800, export to England;—1800 to 1801, scarcity in England; 1804 and '5, scarcity in Spain;

1808 and '9 long embargo; 1809 to '10 and '11, Peninsular war; 1812 '13 and '14, war with England; 1816 and '17, scarcity in England." To this we may add the cause of advance during the latter part of 1828, viz. scarcity in Europe, particularly in England. The state of the currency in 1814 and '15 of course had an effect on the price of those years.

It deserves to be considered also, that the quantity of circulating medium and the value of all sorts of merchandize have fluctuated. The highest yearly average was that of 1796, viz. $12 50; the lowest, that of 1826, viz. $4 65. The lowest price in March 1821, viz. $3 75; and the highest price in March 1796, viz. $15. In one instance the price remained without any change for eleven months, but in very many others it has fluctuated two dollars or two dollars and fifty cents in a few days.

Journal of Commerce.

ART. 48.—*Bot Fly or Nitter.* By Professor Eaton of Troy. [For the New York Farmer.]

While preparing a Zoological text-book for Students, I had occasion to examine the Nitter with considerable attention in the Summer of 1826. The Genus to which this Fly belongs contains more than a dozen species. Two species are common about Troy, New York, and probably in all the Northern States, which I will here describe.

Class—Insecta. Order—Diptera.

Genus—Oestrus.

Generic Character,—Antennæ (horns) disjointed, very short, sunken; face broad, depressed, vesicular: mouth a simple orifice: feelers two, two jointed, sunken: tail inflexed beneath.

Equi, (leg nitter) wings whitish with a black band in the middle and two dots at the tip. Deposits its eggs on the hairs of horses legs, in the month of August. From observations made during the three last Summers, I believe this species to be harmless. I do not believe the Bot is ever caused by it,

Veterinus, (throat-nitter, bot-fly) wings without spots; body iron-rust color; sides of the thorax and base of the abdomen furnished with white hairs. A little smaller and much more agile, than the leg-nitter. Deposits its eggs in the skin under the throats of horses in the month of September, and with them an acrid liquor which gives the horse the pain of a bee's sting, at the instant of contact; hence, this swift-winged species is the dread of horses.

So far, I think, I am justified in giving the natural history of this insect from personal observations. One farther trial is necessary, to complete my proposed account of it. This I have not been able to complete; and take this method to ask the aid of some of the readers of the Farmer. Whoever has an opportunity to see the Bot in the recent *feces* of a horse, should put a quantity of it into a close tin or wooden box, of the capacity of a quart or two, and keep it in a warm place, until some of the Larva become flies. Then determine the species, by accurately comparing them with the descriptions here given. Should it prove to be the species *veterinus,* we could safely adopt the following conclusions.

1. That the Nits deposited in the skin under the throats of horses, become minute larva (maggots) and make their way into the passage to the stomach folds, until they are of a size to destroy that organ, unless they are passed off by some fortunate cause.

2. Should it be thus demonstrated, that the Bot is the larva of the throat-nitter, common sense would suggest an effectual preventive. A piece of oil-cloth fastened under the throat, for three or four weeks commencing the last week in August, must be a perfect defence.

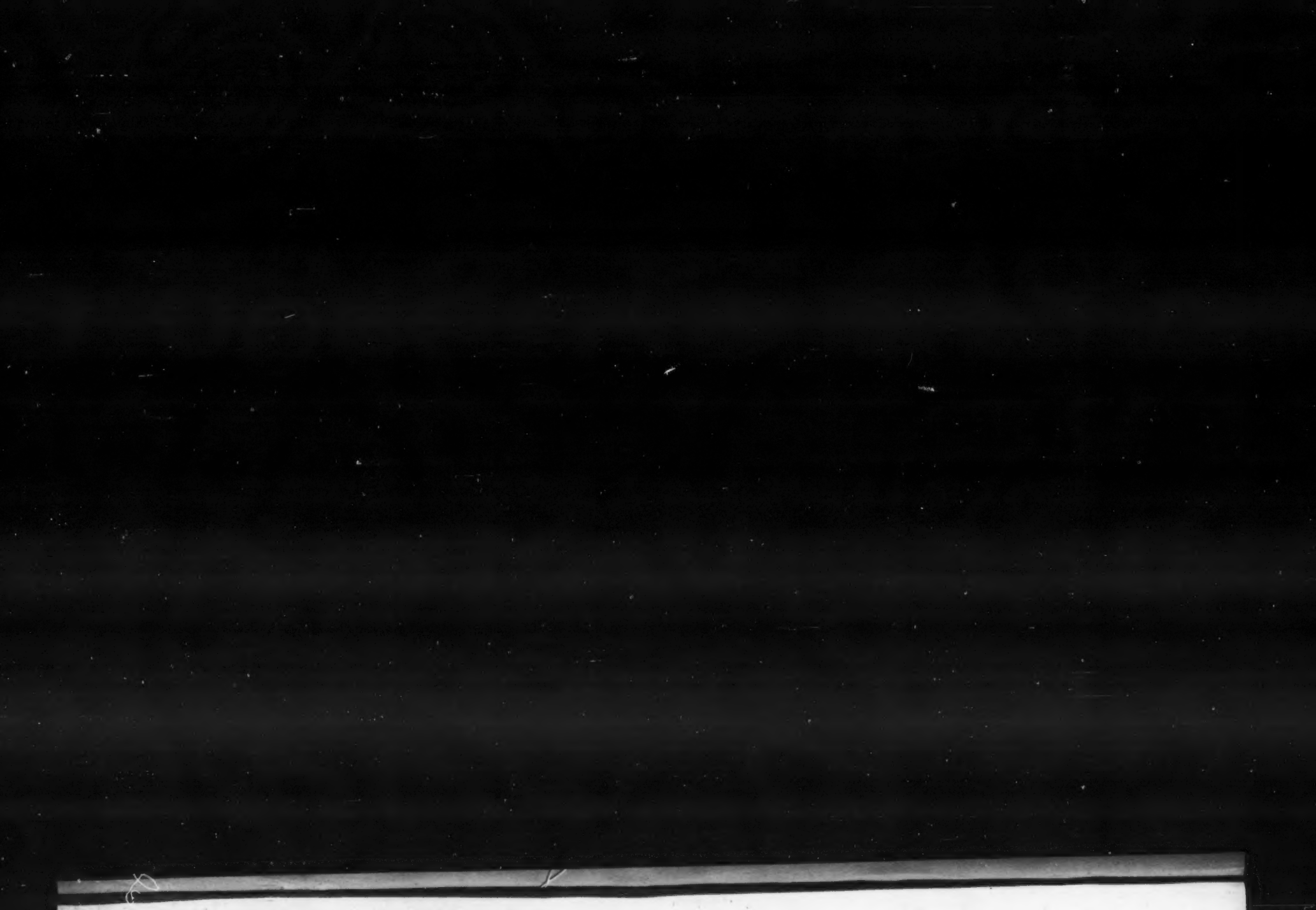
Amos Eaton.

Rensselaer School, Troy, March, 16th. 1829.

ART. 49.—*Agriculture in Holland.* [For the New-York Farmer and Horticultural Repository].

As early as the 13th Century, this country was looked up to by the rest of Europe, as the most advanced in the art of tillage. And since that time to the present, she has not been rivalled, though other countries have done nobly. Indeed for one thousand years it is said Holland has been in a high state of cultivation. It has been remarked of the inhabitants, that their idea of a Farm was, that it should resemble as much as possible a garden, and hence they were led to make choice of small farms, in order to put them under the highest state of cultivation. Their views, and of course, their practice too, must be very different from those of the farmers of this country, who set out in life under the impression that they must possess several hundred acres. Had our forefathers, on landing in this country, been more anxious for the high culture, rather than for the great extent of their farms, the Indian would have enjoyed to this day his hunting grounds this side of the Mississippi, and the history of the farmer now settled in Michigan, would not be, that he emigrated from the land of steady habits, exhausted the soil of a farm in the Western part of the State of New-York, wore out another in Ohio, cleared off the timber of a third in Indianna, which he was obliged to leavetoobtain a better support for his family.

The success of the Flemish husbandry depended on the choice of a farm of ten in preference to one of forty acres. These they brought to the highest state of cultivation. Experience taught them, that by using the finer kinds of grasses and vegetables



they could support more stock, and realize greater profit than from larger farms devoted to coarser products. They were the first among modern nations, who ploughed in green crops for manure. Particular attention was paid to composts; an instance of which is afforded in the management of their sheep. At night they were put under a cover having a board floor, which was covered with sand or street dirt. This, in the morning, was, with the offal of the sheep carried to the compost heap. In other parts of Holland the farms are from twenty, to one hundred and fifty acres. The cows on these farms are allowed to graze, the greater part of the year, on the coarser grasses, and at least once a day fed on rape cake, and other preparations. Great attention is paid to to the cleanliness and health of their cows. The landed property in Flanders is generally freehold, or owned by corporations, and when not cultivated by the proprietor is rented for long periods of fourteen to twenty one years. For light land in particular, great value is placed on urine for which they have cisterns in the fields that are kept supplied from the urine collected in the barn cistern, and by that which is purchased from the neighbouring villages and cities. These cisterns are subterranean, and made of brick, and generally 40 feet long by 14 wide and 8 deep, composed of several apartments, to keep the fresh liquid manure from that which is older. The latter is considered more valuable. The cisterns are emptied by pomps.

If night soil and urine were properly appreciated by the farmers of the United States, they would not manifest so much disregard to its collection and application. In the city of New-York, there are yearly made more than *fifteen thousand tons* of night soil, and *ten million gallons of urine*, independent of that from horses and cows, most of which is thrown into the river, at an expence to the citizens of at least 20,000 dollars. The former made into composts, and the latter used in irrigation, would greatly augment the vegetable products in the vicinity of the city.

There is considerable variety of soil in the low countries, from light sand to heavy loom and rich reclaimed lands from the sea. On these soils the rotation of crops varies. Indeed, Radcliff, who travelled in Holland for agricultural information, divides Flanders into eleven divisions, differing in soil, and varying in the rotation from five to nine and more years. We will mention the rotation of two of the eleven agricultural divisions.

On reclaimed lands, described as being of good loam of yellowish color, mixed with some sand, the following crops are sown in succession.

1 Wheat on manured fallow.
2 Clover, top dressed with ashes
3 Oats, } same year, without manure.
4 Turnips, }
5 Flax highly manured with urine and rape cake.
6 Wheat.
7 Beans.

Or in lieu of the last three crops:

5 Fallow, manured.
6 Rye.
7 Wheat.

8 Beans, manured.

In a division composed of light poor sandy soil, which in the fifteenth century was but barren gravel and heath, by the skill and perseverance of the Flemish farmers, a profitable course of tillage is pursued. The following is the rotation.

1st year, potatoes or carrots, with four ploughings, and twelve tons of farm-yard dung, per English acre
2d year, flax, with two ploughings, and 105 Winchester bushels of ashes, and 48 hogsheads, beer measure, of urine, per English acre.
3d year, wheat, with two ploughings, and ten tons and a half of farm-yard dung, per English acre.
4th year, rye and turnips, with two ploughings, and ten tons and a half of farm yard dung, per acre.
5th year, oats with clover, with two ploughings, and ten tons and a half of farm-yard dung, per acre.
6th year, clover, top dressed, with 105 Winchester bushels of peat on Dutch ashes, per acre.
7th year, rye, with one ploughing, and 52 hogsheads, beer measure, of night soil and urine.
8th year, oats, with two ploughings, and 52 hogsheads, beer measure, of night soil and urine.
9th year, buck wheat, with four ploughings, and without any manure.

In Brabant, almost every farmer possessing a farm of 150 or 200 acres, has a distillery for distilling rye, the profit of which, consists in the manure from the cows he is enabled to feed from the distilled grain.

Rape, *Brassica campestris*, is very generally cultivated as a fall crop after grain. The straw is burned for the ashes, which are thrice the value of any other kinds as a manure. Potatoes yield abundantly, and are held in such high estimation as an economical and wholesome food, that it was at one time in contemplation to erect a monument expressive of the country's gratitude, to the person who first introduced the valuable root. Carrots are used as a general substitute for hay in feeding horses and milch cows. For the cultivation of flax, liquid manure, in which rape-cake has been dissolved, is held in high estimation.

Great attention is paid to the planting and preservation of forest and orchard trees. Every farmer is obliged by law to destroy the catterpillars on their first appearance. If he neglect to free his trees of

them by a certain season, the inspectors have it done at his expense.

The implements of Flemish husbandry are not as convenient as those in use in England; and hence their operations are not carried on with that facility. The general principles of their agriculture are, numerous ploughings, frequent diggings, ample manuring, careful weeding, immediate succession. F.

ART. 50.—AMERICAN INSTITUTE. *Instructions for sowing the Mulberry Seed.*

We have often heard it said, that there are white Mulberries enough in the United States, indigenous or imported, to supply us with seeds, which would be better adapted to the soil and climate than even fresh ones from abroad. We answer that there are no facts on record, in this or any other country, establishing that this plant when raised from foreign seeds, is of a quality inferior to the same species more anciently imported, or supposed indigenous. On the contrary, we see that all the silk countries keep up a constant interchange of the plant, to perfect or improve its varieties, either from seedlings or by grafting. And also, we think it very questionable whether the business of gathering the seeds of the white mulberry, which requires important care and choice, and preparation, is followed up in any part of the United States, or, if it is, whether enough could be obtained for a whole district, and we be enabled to present to our fellow citizens a chance for more than a million of trees. The seeds we offer, which appear uncommonly fine, have been selected from a latitude, which, as a wintry one, is very similar to our own; and this circumstance does away the only exotic character which might be apprehended.

As for the soil required for them, we have said that any refuse land in a farm, which was unpropitious for ordinary sorts of produce, might, if not altogether sterile, be turned into a profitable mulberry orchard. This remark is, however, not applicable to the propagating of the plant from seedlings. The seed must be sown in some small spot of ground possessing every requisite principle of fertility for vegetation; remembering that this kind of seed is very small; its period of germination comparatively long; and that frost, drought or hardness of the soil are absolutely destructive to it.

Another prelimenary remark to be attended to, is concerning the expediency of immediately entrusting these seeds to the ground, or at an early period in the ensuing spring. We shall candidly give our opinion in favour of the latter, for the following reasons and motives. No doubt the seeds could stand the winter under snow. Such a situation they would have in a state of nature, and perhaps even being in a state of forwardness; but in the transitions and vicissitudes of our climate, otherwise so favourable, there is a danger of three untoward cases; drifting of the snow, intense cold, and late frosts. It is now, also, most likely too late to prepare beds with the digging and ploughing necessary for immediate sowing; and, in this experiment of attempting to stock the country with an infinite number of these valuable trees, we think it would be unwise to trust to those slight means of protection, such as mats, twigs, dead leaves, dung, chopped straw, or the like, which can but poorly counterbalance adverse chances. In fine, in silk countries renowned for the equal temperature of their winters, the spring season is, after all, preferred for sowing.

DIRECTIONS.

The ground for the seeds, being of a good soil, and having a warm aspect, requires to be ploughed one foot or more in depth, and spaded up several times; to be freed from old roots, stones and pebbles; and to be lightly mixed with old manure. If the soil is in a hard condition, it should be softened with ashes, soot, or old mould. Towards spring, after another ploughing and harrowing, it should be divided and raised into as many small beds as are wanted; especially for the convenience of watering, if there is water at hand; these beds should never be so wide but what the centre can easily be reached by the hand. The time for sowing should be the 1st of April, or immediately after the equinoctial storms in this climate, and a few weeks later on highlands.—At such a time in fine, as there is no danger of long, deep frosts. The seeds now on hand, are mixed with equal quantities of sand; before sowing they should be steeped several hours in water, and left to dry; the next day they must be sown by the hand in straight drills, an inch and a half deep, and five or six inches assunder, and be covered over with the hand or a small hoe or rake. This mode of sowing is simple, sufficiently safe, and easy even to those who only amuse themselves with gardening. It is a good precaution to strew some straw between the drills, in such a manner, however, as not to obstruct the view of the strait lines, to which much attention must be paid. The use of hot beds protected by glasses, or of boxes kept in green-houses, is not approved by culturists, from a sound experience that it is better to trust to healthy good seeds raised in the open air, than to run the risks of a change of temperature. Unless the weather is remarkably cool, and the ground too dry, the seeds will germinate and shoot up on the 12th day, at farthest.

The follwing mode *of laying mulberry seeds in the ground* is recommended in a late German work, translated and published last year by order of government, vid. Document 226, letter from James Mease, &c.

page 57, taken from the work of Mr. De Hazzi.

"Two days before the sowing, the seeds must be steeped in water, and afterwards rubbed upon a packthread, which must be laid in the bottom of the drill, and covered with earth, the drills being made two inches deep." &c.

Something like this singular mode is related by the *Abbe Suavages* in his treatise on the mulberry, 1763. He adds, without recommending it, that it had anciently been used. Be it as it may, the method is obviously very dangerous to the safety of the seedlings, exposing all alike to be shaken by the least impression communicated to one, or torn from their tender roots by weeding near the drills, or by a quadruped accidentally crossing the bed; or by some mischievous boy in search of a piece of line; or by the innocent inattention of some person treading upon a drill. There are many evils which cannot always be guarded against, but this mode seems to invite risks with a great want of common foresight!

Several cares or attentions are necessary during the first two months, and sometimes afterwards; these are *watering*, *weeding*, and *thinning*. The first mentioned should be frequently attended to in the beginning, and so long as the seedlings cannot have thrown their roots deep; the second requires to be done whenever any of the old herbs, spontaneous on that ground, come up in the drills or between them; the last *thinning*, should not be long deferred, because mulberry seedlings grow the better for being as much as two inches apart, or even three in the second year. Delay in this operation would make it difficult to conduct it without injuring the roots of those left behind; and when too near to each other, the plants will certainly suffer by spindling. Any delay in thinning is proper which might in a few days show the best seedling of the two or more in a cluster.

Budding, the next thing necessary, consists in clipping or pinching off all lateral buds from the stock of the seedling, leaving only the middle one, which thereby profits by the whole sap, and strengthens the plant. This, however, should always be done before the leaves unfold, lest the pulling or twisting of the bud should injure materially the tender bark.

Topping, the last attention necessary, must be done early in the spring of the second year. It is performed by cutting down every seedling with sharp-edged nippers, which give no strain to the root. The plants are cut level with the ground. This process is principally intended for the benefit of the root, and the enlargement of the stem or stalk, which, by the next fall will be more than a foot high, and as thick as the finger.

The seedlings, to be in a good condition at the end of the second year, require nothing but a healthy body of roots, and a strong stock; any thing further for the trimming and shaping of the bushy part will be done in the nursery by grafting or pruning: all which we will take care to inform culturists in good season. F. P.

New York, Dec. 4th, 1828.

ART. 51.—*Facts respecting the successful cultivation of Broad Beans in the Middle States.*—[To the Editor of the New-York Farmer.]

Sir,—I think, and I have no doubt but your readers will allow, that Mr. Wilson is the last person who should dictate to you as to the use you should make of your paper. He has occupied a number of pages of your Repository with "*speculative dissertations*," and is now endeavouring to exclude my communications from your columns without having detected one single error. Mr. Wilson has attempted to discourage the cultivation of the *Vicia faba* or Broad bean in this country because they will not yield so well as in England; the same may be said of Potatoes, Turnips, and full two thirds of the different kinds of vegetables in use for our tables. This is easily accounted for by Mr. Wilson, who informs us (page 154 of his Economy) that "the drying heat of our summer has been observed to kill the largest button ball and other trees," and we all know the effects it, and the severity of our winters, have on vegetation in general; notwithstanding this, I am fully convinced that, if the directions I have given be attended to, the broad beans may be cultivated here in great perfection. If Mr. Wilson has not succeeded with them, it is no proof that others may not. I was at the seed store of Messrs. Thorburn & Sons, soon after their late importations of these beans arrived, and heard Governor Lewis, of Strattsburg tell Mr. Geo. Thorburn that his gardener had raised some every year for more than twenty years, and that he had no difficulty in procuring enough for his family. My near neighbour, Mr. T. Kinnersley, informed me a few days ago that he had planted about two quarts in the season, which produced more than enough for his family, and that he gave away several half pecks. My neighbour, Mr. Anthony Tiemann, also informed me that one pint of seed produces enough for his numerous family. Mr. Mc Arthur, in the Bloomingdale-road, sent several bushels to Washington and Catherine Markets last spring. If Mr. Wilson is too wise to be taught by a "*Weaver*," I would refer him to Mr. W. Phelan, Mr. N. Fisher, and Mr. Beckly, all practical gardeners in this vicinity. These gentlemen, and many others that I could mention, have all raised them in perfection, and will no doubt give information respecting them.

If it be admitted that the American climate is unfavourable to the production of broad beans, why should Mr. Wilson discourage us from treating of the cultivation of other vegetables not generally introduced into the United States? He says, art. 181, vol. 1. "I admit the climate of England to be more favourable than that of America, for the production of one species of vegetable, and but one, the *Vicia faba*." I blush then for the apathy of our great economist, Mr. W. Wilson, that he should suffer nearly thirty years to elapse without having given ample directions for the cultivation of all useful vegetables, so that they could be rendered as plentiful here as in England. As he considers me incapable of doing this, I shall leave the ground to him, trusting that he will be able to communicate, "that which may be of more real service to the public than all I have written or can write on the subject."

I am, Sir, your obedient servant,

T. BRIDGEMAN.

Bowery road, New York, March 1829.

ART. 52.—*Recent valuable patents.*

Improved Hoe.—The whole plate is made of rolled steel and hardened. The eye is cast, and in a shape that renders it impossible to get loose. The most approved metal for the eye is brass, or a combination of zink and tin, neither of which will rust. In common hoes the eye very frequently is the first part that gives way. Dr. Steele of Woodbury Con. is the patentee. They may be had we understand, of Townsend, Titus and Co. of this city at about $7 50 per dozen.

Improved Roof for admitting the sun and excluding rain.—By the construction of this roof the rays of the sun are admitted, and the rains excluded at pleasure. For drying bricks, and protecting them from showers and from the dampness of the night, this is a very convenient, economical, and important contrivance, as great injury is often sustained from sudden rains. It is equally applicable to manufactories of salt and sugar, to tanneries, and other operations that require the heat of the sun and protection from rains. It is the invention of Mr. N. Adams of Cornwall, (N. Y.)

Cider Press.—MR. EDITOR.—Last fall I put up a self-discharging cider press, made by Mr. Edward Thurston of New-York. It is the cheapest and most expeditious mode I have ever known, being portable, and requiring less power than common presses. Being so well pleased with this improvement, I take this opportunity to recommend it to farmers.

GEORGE H. HILL.

Hampstead, Rockland co. N. Y. March 1829.

Various other improvements have recently been brought to light, and some of them of great importance. A machine for spinning cotton has just been brought to this city, which, with half the power and half the number of hands, will spin more than the machines now in use.

Another machine for the manufacture of cloth, carpets and blankets, without spinning or weaving is likely to be of much public benefit.

NEW YORK, MARCH 31, 1829.

Vine Cuttings.—Mr. Phelan in his communication, in answer to "A Subscriber," disapproves of occupying the pages of the Farmer with useless controversy. He is fully of the opinion, that cuttings will produce the most vigorous and fruitful vines. He asserts that they are more easily packed for transportation, and receive less injury—that he has received cuttings from Gibraltar, in fine order, and that they succeeded remarkably well.

Query.—MR. EDITOR.—Will some one of your experienced horticultural readers do the favor to inform me, through the medium of the Farmer, of a successful method of preserving celery, during the Winter. Q.

Native Grape.—J. Cable Esq. of Upper Louisanna in a letter to Mr. Prince of the Linnean Botanic Garden, states that the Spaniards on the Rio Grand, in Texas, have Vineyards of native grape "of which they make Brandy, Teneriffe, Sweet Malaga, and Claret Wines, that are tolerably good."

We hope to be able to lay before our readers in our next number, a collection of facts respecting the cultivation of native wine grapes.

Japan Rose.—A Camellia was exhibited at our Office in the early part of the month, by Mr. Thomas Bridgeman. Although it was only fifteen inches from the lower branch to the top, there were 11 large full-blown flowers, and 11 buds. It was a beautiful, vigorous, and thrifty plant.

A very prolific Sheep.—Judge Mitchill of Queen's County, has made a communication to Samuel L. Mitchill, of an Ewe or female Sheep, in his neighbourhood having a litter of *six* lambs at a birth. She is the property of Mr Jos. Denton, a correct and true man, who has given a certificate in writing of the reality of the occurrence. The young ones are all dead; though the dam is living. It is certain that the four latter individuals of the birth were still-born, and it is presumed this was the case with the two former, as they were lifeless when discovered.

This event is the more remarkable, in as much, as the Ewe generally brings but one lamb, sometimes two, and more rarely three. Perhaps there is not another instance on record of such a numerous issue, at once, from this species of animal.

The whole six have been preserved, for deposit in

some collection or museum, should any proprietor wish them for that purpose. They will make a rare and uncommon exhibition. Should any keeper of a managerie incline to have them for the purpose of aiding and diversifying his show, and wish to possess the parent Sheep, the owner will part with her on reasonable terms, that is to say, by receiving a female of equal value in exchange.

Ed. of N. Y. Far. S. L. M.

Silk and Silk Worms.—The Philadelphia papers contain an advertisement from the Pennsylvania Society for the Promotion of the Culture of Mulberry Trees, and raising of Silk Worms, which contains the following information. Beside offering premiums for the accomplishment of these objects of their society, they have made considerable exertions to procure from Connecticut a person to teach the mode of winding silk from cocoons, and of making sewing, but without effect. They intended, also, in the event of such a person being procured, to form a fund for the purchase of cocoons. Having been disappointed in their expectations in this particular, they have sent to France for an experienced workman, and have reason to believe that one will arrive in time for attending to the business in the course of this year. They therefore think proper to assure those who may wish to engage in the business of rearing Silk Worms, that a fund will be established for the purchase of Cocoons, at such a price as will enable the Society to continue their efforts, without encroaching upon the small capital which they have at command. They regret that this will not permit them to buy at a price amounting to a bounty, but *they will give the just value of the several qualities which may be offered for sale*, and they hope that those who may engage in the business, will exert themselves to bring forward cocoons of the best quality; as, otherwise, they cannot be paid a price which will satisfy them. Cocoons differ greatly in quality, owing to the nature of the food upon which the worms are fed, and to the great care taken of them during their short existence. The Society beg leave to refer for ample instructions as to their management, to the pamphlet which they published last year, which may be had of Carey, Lea & Carey, corner of Fourth and Chesnut-streets, and also of E. Littell, No. 136 Chesnut-street.

Corn.—A certificate has been published by the President of an Agricultural Society in Ohio, signed by Messrs. Amasa Turner and Seth Jefferson, of Mantua, who state that on the 29th of October last, they measured the corn which grew on one acre of land, belonging to Mr. Seth Harmon, and found it to be 108 bushels and 21 quarts, of shelled corn. Several other acres, in the same field, averaged 100 bushels each.

The Cucumber has been found to contain, on analysis no less than 582-80 parts of water in 600; the remaining 17-20 parts consist of 13 different ingredients, in different proportions, the principal of which are, a fungous matter similar to the mushroom, and a sweet substance, which gives to this fruit its peculiar flavour—*Mechanic's Magazine.*

Culture of Turnips.—Until the beginning of the eighteenth century, this valuable root was cultivated only in gardens or other small spots for culinary purposes, but Lord Townsend, attending king George the first, in one of his excursions to Germany in the quality of Secretary of State, observed the Turnip cultivated in open and extensive fields, as fodder for cattle, and spreading fertility over lands naturally barren; and on his return to England, he brought over some of the seed, and strongly recommended the practice which he had witnessed, to the adoption of his own tenants, who occupied a soil similar to that of Hanover. The experiment succeeded; the cultivation of Field Turnips gradually spread over the whole county of Norfolk, and has made its way into every other district of England. The reputation of the county as an agricultural district, dates from the vast improvements of heaths, wastes, sheep walks, and warrens, by enclosing and manuring; the fruits of the zealous exertions of Lord Townsend and a few neighbouring land owners, which were ere long imitated by others. Since these improvements were effected, rents have risen in that county from one or two shillings to twenty shillings an acre; a county consisting chiefly of sheep walks and rabbit warrens has been rendered highly productive, and by dint of management, what was thus gained, has been preserved and improved even to the present moment. Some of the finest corn crops in the world are now growing upon land, which, before the introduction of the Turnip husbandry, produced a very scanty supply of grass for a few lean and half starved rabbits.

Mr. Colquhoun in his 'Statistical researches,' estimated the value of the Turnip crop annually growing in the united kingdom of Great Britain and Ireland at fourteen million pounds sterling, (equal to upwards of SIXTY MILLIONS OF DOLLARS.) But when we further recollect that it enables the agriculturist to reclaim and cultivate land, which without its aid, would remain in a hopeless state of natural barrenness, that it leaves the land clean and in fine condition, and also to insure a good crop of Barley and a kind plant of Clover, and that this Clover is found a most excellent preparative for Wheat, it will appear that the subsequent advantages derived from a crop of Turnips must infinitely exceed its estimated value as fodder for cattle. (Sir William Scott in the Quarterly Review.)

Premiums offered by "The Domestic Horticultural Society of the Western part of the State of New York,"

To be adjudged at their stated Meeting, to be held on the first Tuesday of June next, at Auburn, for specimens then and there to be presented, viz.

Fruits.

For the best quart ripe strawberries $2 00; for the next best 1 00; for the best quart ripe Cherries 2 00; for the next best 1 00.

Culinary Vegetables.

For the best half peck green Peas in the pod $2 00; for the next best 1 00; for the best half peck string beans in the pod 2 00; for the next best 1 00; for the best 100 shoots of Asparagus 1 00; for the next best 0 50; for the best dozen young Turnips 1 00; for the next best 0 50; for the best dozen young Onions 1 00; for the next best 0 50; for the best 25 young Potatoes 1 00; for the next best 0 50; for the best three cabbage heads 1 00; for the next best 0 50; for the best 6 Lettuce plants 1 00; for the next best 0 50; for the best 25 Radishes 0 50; for the next best 0 25; for the best 6 blood Beets (long or short) 1 00; for the next best 0 50; for the best 6 Cucumbers 1 00; for the next best 0 50; for the best dozen Carrots 1 00; for the next best 0 50; for the best specimen of any valuable culinary Vegetable not enumerated, one dollar each, extending to three sorts. Of culinary vegetables every specimen entitled to a premium, must be meritorious and fit for the table.

Flowers.

For the most beautiful and desirable double Tulip $1 00; for the next best 0 50; for the most beautiful and desirable single Tulip 1 00; for the next best 0 50; for the most beautiful and desirable double Hyacinth 1 00; for the next best 0 50; for the most beautiful and desirable monthly Rose 1 00; for the next best 0 50; for the most beautiful and desirable hardy Rose 1 00; for the next best 0 50.

For the most beautiful specimen of flowers, not enumerated, one dollar each, to extend to six sorts.

Every specimen offered of fruits, culinary vegetables and flowers, must have been cultivated by the person claiming the premium, or by some member of his family; and no premium can be awarded except to a member of the Society. Any person can become a member of the society, at the time of the stated meeting, or at any time before, by sending *the name* and paying the annual subscription of a member, (two dollars,) to Joseph Fellows, of Geneva.

Each successful applicant for a premium will be required to furnish a written and particular statement of the culture of the plant, with the soil and aspect.

JOHN GREIG, *President.*

A. Glover, *Secretary.*

Horse-Radish.—This plant is propagated by cuttings from the root, either cut from the top an inch or two long, or some old roots cut into pieces of that length, or by offsets that arise from the sides of the main root, retaining the crowns or top shoots in as many parts as possible. These should be planted as early in the spring as practicable, in rows two feet apart, and six or eight inches from each other in the rows. The ground should be well manured and dug two spades deep, and the cuttings should be sunk full ten inches with the crowns upright; this being done, level the surface of the ground, and afterwards keep it free from weeds until the plants are full grown. With this management the roots will be long and straight, and the second year after planting will be fit for use. They may be taken up the first year, but then the roots will be slender, therefore it is the better way to let them remain till the second. If in taking up the roots some offsets be left in the ground, they will produce a successive supply for many years.

Brussels Sprouts.—For the garden, these may be treated as Winter Cabbages:—the seeds may be sown the middle of May, and the plants set out in the month of July, in good rich ground. They are never so delicious as when rendered tender by smart frosts; they are very valuable plants to cultivate, particularly in the more Southerly States, as they will there be in the greatest perfection during the winter months; they will also, if planted in a gravelly soil, and in a sheltered warm situation, bear the winters of the Middle States; and may be kept in great perfection in the Eastern States, if taken up before the winter frost sets in with much severity, and placed in trenches up to their leaves, and covered with straw or other light covering: the heads may be cut off as they are required for use; and in the spring, the stems being raised up, will produce an abundance of delicious Greens.

This vegetable is frequently raised in England for cattle, which, on account of its luxuriant growth, is very profitable; the Brussels Sprouts grow there from three to five feet high, and produce an abundance of Greens in the winter.—*Young Gar. Assistant.*

Colewort or Collards.—This is a species of Cabbage which is eaten when young; it so nearly resembles the early kinds of Cabbage, that it is very seldom cultivated. The English prefer sowing the seeds of early heading kinds of Cabbages, as a substitute, which being done at different seasons, enables them to procure a supply of fresh Greens from their gardens every day in the year. This is not attainable here, on account of the extremes of heat and cold; but Collards would prove very valuable and acceptable in the event of an unfavourable season for fall Cabbage. Ib.

If the seeds of Early York, Early Dutch Dwarf, or Sugar-loaf Cabbage be sown in June, July and August, and transplanted as they become fit, into good ground from fifteen to eighteen inches apart, the first planting would make good heads for fall use; and the plants of late sowings, if transplanted in September and October in a warm border, would produce tender sweet eating Greens for use in the early part of the Winter; the latter plantings may be placed 10 or 12 inches plant from plant. These could be easily sheltered on the approach of severe weather, without being taken up. Ib.

Cardoons.—The Cardoon Artichoke is much cultivated in Europe for Culinary purposes, such as for salads, soups, stewings, &c.

The stems of the leaves being thick and crisp, are the eatable parts after being blanched. They are in perfection in Autumn and Winter.

The seeds may be sown in a bed of rich earth in the month of April; when the plants are up strong, they should be thinned to four or five inches distance, to prevent their becoming weak. They may be transplanted in June at the distance of four feet from one another every way; observe, before planting, to dress their tops and roots the same as Cellery. As they advance in growth they are to be earthed up for blanching, keeping the leaves close together; this may be done with bass or matting as practiced with endive; they are afterwards to be earthed up gradually from time to time, until whitened to a sufficient height. As winter approaches, Cardoons must be taken up and laid away like Cellery, or they may be preserved with sand in a cellar. Ib.

Scorzonara.—This plant has long been raised in British gardens for culinary purposes, and especially as an ingredient in soups, on account of its palatable and nourishing roots. Some boil and eat them like Carrots, &c.; in which case they should be deprived of their rind, and immersed in cold water for half an hour, or they will be bitter. They are raised precisely in the same manner as Salsify. If the seed be sown in April, in a good deep soil, the roots will attain perfection in autumn, and continue good all the winter. They last from three to four years, according to the quality of the earth and care bestowed on them, but it is better to raise a few from seed every year.

Skirret.—Skirrets should be planted in a light moist soil, for in dry land the roots are generally small, unless the season proves wet. The root of the Skirret is composed of several fleshy tubers, as large as a man's finger, and joining together at top. They are eaten boiled, and stewed with butter, pepper, and salt, or rolled in flour and fried, or else cold with oil and vinegar, being first boiled. They have much of the taste and flavour of a Parsnip, but a great deal more palatable. Ib.

Shallot.—The true Shallot is a native of Palestine, and is considered to possess the most agreeable flavour of any of the Allium genus. It is consequently highly deserving of cultivation. They are propagated planting bulbs or offsets in the fall of the year; which may be set out with a dibble, in rows twelve inches apart, by four to six inches distance in the rows; or they may be placed in drills two or three inches deep and covered up with a trowel or hoe. The gardeners about New York plant large quantities of the bulbs early in September; by this means they are enabled to supply the markets in April and May with a mild Allium which meets a ready sale. Ib.

After the tops die down, the bulbs must be taken up, and the offsets divided: a portion of these should be kept in a dry place to plant the ensuing Autumn.

Flowers.—There is no part of gardening which requires so much elegance of taste and fancy, as in setting off a border or bed of intermixed flowers to advantage. In assemblage with other flowers, the different kinds of hardy bulbs may be planted in small clumps of six, seven, or eight inches in diameter, three, four, five or more roots in each, according to their size and growth, and these at suitable distances from one another. Likewise, observe to diversify the kinds and colours, so as to display when in bloom the greatest possible variety of shades and contrasts.

Flower beds should be kept free from weeds, and watered occasionally in the summer. In the autumn they should be covered with straw or light litter; this should be taken off in the spring, and the ground should be hoed and dressed in such a manner as to enliven the earth around the roots of the plants, as also to give the whole a neat appearance. Ib.

Plants kept in Rooms.—Exotic plants kept in our greenhouses thrive best in a temperature and soil similar to that in which nature first produced them, hence those who cultivate the several kinds from various climates, have to provide suitable composts and also separate departments, where the different degrees of heat are kept up according to the nature and description of the plants. The generality of those denominated greenhouse plants, and which are kept in rooms, should be placed where they can have light and sun, without being exposed to the frost. Air, heat, and moisture are essential to the growth of plants, but these should be given in due proportions according to circumstances. In frosty weather they should be kept from the external air, and watered very sparingly. When water is necessary, it should be applied in the morning of a mild sunny day. The plants should be kept free from decayed leaves, and the earth at the top of the pots should be sometimes loosened to a moderate depth, and replenished with a portion of fresh compost. Plants kept in private

houses are often killed with kindness; the temperature of a room in the winter need not be more than ten degrees above freezing. If plants are healthy, they may be kept so by attention to the preceding hints; unhealthyness generally arises from their being subjected to the extremes of heat, cold, or moisture, or from total neglect.

Officers of the Massachusetts Horticultural Society. At a Meeting held on the 17th inst., the following gentlemen were chosen officers.

President,

H. A. S. DEARBORN, *Roxbury.*

Vice Presidents.

ZEBEDEE COOK, Jr. *Dorchester.*
JOHN C. GRAY, *Boston.*
ROBERT MANNING, *Salem.*
ENOCH BARTLETT, *Roxbury.*

Treasurer,

CHEEVER NEWHALL, *Boston.*

Corresponding Secretary,

JACOB BIGELOW, *Boston.*

Recording Secretary,

ROBERT L. EMMONS, *Boston.*

Council,

John Heard, Jr. Samuel Downer, Thomas Brewer, Charles Tappan, Daniel Waldo, Oliver Fiske, Elias Phinney, Wm. H. Sumner, Jacob Tidd, J. M. Gourgas, J. M. Webster, M. D. M. A. Ward, M. D. J. G. Cogswell, A. Aspingwall, Benj. V. French, John B. Russell, William Lincoln, William Jackson, Jona. Winship, Sam. Jaques, Jr. Henry A. Breed, A. D. Williams, Samuel Ward, Charles Senor, T. W. Harris M. D. Thomas Nuttall, William Carter, William Kenrick, W. Worthington, Joseph G. Joy, L. M. Sargent, Joseph Curtis, Tho's Dowse, J. P. Leland, B. W. Crowninshield, E. H. Derby, John Lemist, N. Davenport.

It is a source of real gratification to us, that we are enabled to state, that upwards of *one hundred* and *sixty* have become subscribers to this institution.

What the capacity, and industry, and perseverance of men can accomplish, in aid of the products of the garden, and the field, we believe will be done by the influence and efforts of the members of this Society. There are comprised among its associates, many of our scientific and opulent citizens; and many of our highly respected practical cultivators.

WILLIAM PRINCE, Esq. proprietor of the Linnæan Botanic Garden, at Flushing, Long Island, has with a promptitude and liberality that is highly appreciated by the Society, proposed to present for its use, *fifty trees* of the finest varieties in his garden, so soon as any one shall be designated to receive them.—*N. Eng. Farmer.*

Working Oxen.—Much has been said and written against the common mode of working oxen with a yoke. This manner of attaching them to their load is said to be the principal cause of their moving with a slow pace. When oxen are attached to a cart with a stiff, heavy tongue, according to the New England mode, it is often the case that the load is so disposed in the cart that it bears heavily on their necks, and is very oppressive, especially in going down hill. And sometimes in going up hill, the tongue of the cart has a tendency to rise, in consequence of the preponderance of the part of the load which is behind the wheels, and the oxen are nearly choked by the bows of their yokes being drawn against their throats.

In France, working oxen are harnassed by the heads in such a manner as to call into action the joint power of the neck, and the base of the horn. This method was some years since introduced into Ireland, with complete success. Two oxen thus harnassed, according to English accounts, were able ta draw, with ease, *three tons* weight.

Mr. Cooper uses collars on oxen as on horses, except that they are buckled on with the narrow and open end downwards; the chains are fastened to them in the same direction as on the horse harness; the draught is therefore more inclined than with horses, the line of the chains being almost up to their backs, which is necessary from the different shape of horses and oxen. They draw, when in harness, abreast in pairs, single, or in a line, *and walk as fast as horses.* —*N. E. Farmer.*

Average Price of Vegetables sold at Washington Market, for March 1829. [Corrected by WILLIAM CUNR, Gardener. For the N. Y. Farmer.]

Cauliflower—This article has been very fine, and sold at from 12 1-2 to 31 1-4 cents per head.—*Brocoli*, a few at $1 50 per doz.—*Parsley*, 4cents per bunch.—*Lettuce*, plenty and fine from 25 to 50 cents per dozen heads.—*Leeks*, 12 1-2 cents per bunch.—*Spinage*, plenty at from 75 to 1 00 cents per bushel.—*Corn-Sallad*, plenty at from 25 to 31 1-4 cents per half peck.—*Cabbage*, hard headed, plenty and good at from 25 to 50 cents per dozen.—*Savoys*, plenty at from 25 to 37 1-2 cents per dozen.—*Radishes*, 3 to 4 cents per bunch.—*Beets*, plenty from 75 to 1 25 cents per hundred.—*Parsnips*, 75 to 1 00 per do.—*Carrots* from 50 to 81 1-4 cents per hundred.—*Turnips*, at from 37 1-2 to 50 cents per bushel.—*Salsify*, from 6 to 10 cents per bunch.—*Water-Cress*, plenty from 25 to 31 1-4 cents per half peck.—*Celery*, plenty and good at from 6 to 10 cents per bunch.—*White Onions* from 1 00 to 1 25 per bushel.—*Horse Radish*, 3 to 4 cts. per bunch. The supply of vegetables this month has been very abundant, except Potatoes, which have brought from 50 to 87 1-4 cents per bushel.